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THE COMMON CURRICULUM

Grades 1-9

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Ontario

Ministry
of Education
and Training

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MEMORANDUM TO: Directors of Education
Principals of Schools
Chairs, Provincial Education Organizations

FROM: Jill Hutcheon
Assistant Deputy Minister
Policy Priorities and Curriculum Development

Mariette Carrier–Fraser
Assistant Deputy Minister
Elementary, Secondary, and Postsecondary Operations and French–Language Education

DATE: February 7, 1995

SUBJECT: **The Common Curriculum: Policies and Outcomes, Grades 1–9, 1995**
The Common Curriculum: Provincial Standards, Language, Grades 1–9, 1995
The Common Curriculum: Provincial Standards, Mathematics, Grades 1–9, 1995

We are pleased to provide you with The Common Curriculum: Policies and Outcomes. Grades 1–9. 1995 and the field–test versions of The Common Curriculum: Provincial Standards. Language. Grades 1–9. 1995 and The Common Curriculum: Provincial Standards. Mathematics. Grades 1–9. 1995.

The Common Curriculum: Policies and Outcomes. Grades 1–9. 1995 replaces both the original document of February 1993 and its plain–language version (The Common Curriculum. Grades 1–9: Version for Parents and the General Public. September 1993).

In the Fall of 1993, the ministry invited interested educators and individuals to submit written suggestions and comments on how The Common Curriculum. Grades 1–9 (1993) should be revised. The 1995 version of the document reflects the recommendations of the Review Committee, which were based on its analysis of the submissions received during 1993 and 1994.

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It should be noted that the French–language version of the Common Curriculum, entitled Le programme d'études commun — Politiques et résultats d'apprentissage, de la 1re à la 9e année, 1995, and the French–language version of the provincial standards, particularly Le programme d'études commun — Normes provinciales de langue, de la 1re à la 9e année, 1995, have been developed to reflect the specificity of French–language education in Ontario.

The Common Curriculum: Policies and Outcomes, Grades 1–9, 1995 describes the curriculum for the Province of Ontario for Grades 1 to 9 and sets out learning outcomes which must be achieved to help students prepare for life, work, and learning in a changing world. The goal of the Common Curriculum is for all students to achieve a high standard of education:

- The outcomes and associated standards will be the basis for assessing, evaluating, and reporting the success of both students and education programs.

- The ten essential outcomes provide the focus for school programs in Grades 1 to 9 and the achievement of them is the responsibility of all school staff.

- The specific outcomes continue to be organized into four broad areas of study — Language; Mathematics, Science, and Technology; Personal and Social Studies: Self and Society; and the Arts. These outcomes emphasize the links among specific outcomes and topics. The ability to see these links will enable students to apply knowledge and skills developed in one field of study to other fields, and to real–life situations.

- All programs in all grades must help students achieve the learning outcomes.

The ministry expects all schools to proceed with the implementation of the Common Curriculum in Grades 1–9 that began in September 1993. By September 1996, the programs for Grades 1–9 in all schools will be based on the Common Curriculum and associated provincial standards.

Beginning in March 1995, the ministry will be assuming a greater role in co–ordinating the development of curriculum materials. In doing so, it will draw on the wealth of teacher expertise across the province. This approach, consistent with the recommendations of the Royal Commission on Learning, will ensure consistent learning expectations across the province and a curriculum development process that is more efficient and effective.

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The field–test versions of the Provincial Standards in Language and Mathematics are the result of close collaboration among teachers and ministry staff who revised the documents. These revisions were based on recommendations and responses received on the December 1993 mathematics validation draft and the March 1994 language validation draft. This approach to curriculum development represents a truly collaborative process, one which we intend to emulate in developing standards for the other program areas in The Common Curriculum: Policies and Outcomes, Grades 1–9.

Schools and school boards will be expected to work with these versions of the Provincial Standards in Mathematics and Language as part of their implementation of The Common Curriculum: Policies and Outcomes, Grades 1–9, 1995. Teachers and boards, while working with the standards, are encouraged to provide feedback on the appropriateness of the achievement levels and on how the standards are being used for student assessment and reporting to parents. This information will be used to revise the standards.

These documents and the information in this memorandum will be of support as you implement your school programs. Bulk copies of these documents will be delivered to school board offices.

Jill Hutcheon

Jill Hutcheon
Assistant Deputy Minister
Policy Priorities and Curriculum
Development

Mariette Carrier-Fraser

Mariette Carrier–Fraser
Assistant Deputy Minister
Elementary, Secondary, and Postsecondary
Operations and French–Language
Education

cc: Regional Directors of Education

INVITATION TO RESPOND

The Ministry of Education and Training invites you to respond to the field test version of the Provincial Standards, Grades 1-9. As you work with the standards documents, you are encouraged to submit your comments. Your responses will be reviewed as part of the field test revision process which will take place during 1995-1996.

Content of Responses

In your response, please comment on specific areas of the documents and refer to the document and page number. In addition, please comment on how the standards are being used in your school and with your community.

Document Name

Please check:

The Common Curriculum: Provincial Standards, Language, Grades 1-9, 1995 ☐

The Common Curriculum: Provincial Standards, Mathematics, Grades 1-9, 1995 ☐

Respondent Information

Please include your name and, if applicable, your title, the name of your organization, and a mailing address, so that we can acknowledge your response.

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Please submit your response at any time during the field test and by **June 30, 1996**. You can send it by Internet as well as by mail or fax, to:

Provincial Standards Project
Ministry of Education and Training
18th Floor, Mowat Block
900 Bay Street
Toronto, Ontario
M7A 1L2
Fax: (416) 325-2231
Internet: joan.stalker@edu.gov.on.ca

Thank you for your continued participation in the curriculum development process.

Please include this form with your response.

INVITATION À RÉPONDRE

Le ministère de l'Éducation et de la Formation vous invite à répondre à la version préliminaire des normes provinciales applicables de la 1re à la 9e année. Lorsque vous aurez utilisé ces normes dans le cadre de votre travail, veuillez nous faire parvenir vos commentaires. Nous en tiendrons compte dans l'exercice de révision qui aura lieu en 1995-1996.

Contenu des réponses

Vos commentaires doivent porter sur des éléments précis des normes, nom du document et numéro de page à l'appui. De plus, veuillez indiquer de quelle façon les normes sont utilisées dans votre école et votre collectivité.

Nom du document : veuillez cocher s'il-vous-plaît

Le programme d'études commun - Normes provinciales de langue, de la 1re à la 9e année, 1995. ☐

Le programme d'études commun - Normes provinciales de mathématiques, de la 1re à la 9e année, 1995. ☐

Renseignements personnels

Veuillez indiquer votre nom et, s'il y a lieu, votre titre ou fonction, le nom de l'organisme dont vous faites partie ainsi que votre adresse postale, pour nous permettre d'accuser réception de votre réponse.

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Veuillez nous transmettre votre réponse à n'importe quel moment durant la révision de la version préliminaire, mais au plus tard **le 30 juin 1996**. Vous pouvez l'envoyer par Internet ou encore par la poste ou par télécopieur à l'adresse suivante :

Projet des normes provinciales
Ministère de l'Éducation et de la Formation
17e étage, édifice Mowat
900 rue Bay
Toronto ON M7A 1L2
Télécopieur : (416) 325-2156
Internet : lili.lan@edu.gov.on.ca

Nous vous remercions de votre collaboration soutenue.

Veuillez joindre ce formulaire à votre réponse.

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Cette publication est également offerte en français sous le titre suivant : *Le programme d'études commun, de la 1re à la 9^{e} année, février 1993.*

This document will be revised in response to users' comments and the suggestions of educators, parents, and interested members of the community. By providing a focus for ongoing discussion of relevant issues in education, the document will ensure that policies and practices keep pace with changing student needs and societal requirements, reflect our expanding understanding of how students learn, and promote overall excellence in education.

Introduction

Like other institutions in a rapidly changing world, schools must constantly strive to respond to new developments in order to meet the needs of their communities and those of society at large. This document describes the Ministry of Education and Training's curriculum for the Province of Ontario for Grades 1 to 9, which has been designed to respond to current and anticipated developments and changes in our society and the world at large. It is intended to provide direction to all those who have responsibility for curriculum development, implementation, and review in Ontario – teachers, principals, consultants, school board supervisory officers, and trustees. Ultimately, its aim is to enable individual schools to design programs that meet local needs.

The curriculum in this document supersedes the one described in *The Formative Years, 1975,* and the subject guidelines for Grades 7 to 9, including those developed under *Ontario Schools, Intermediate and Senior Divisions* (OSIS), 1989. However, these and other earlier ministry documents remain valuable as *resources* for program planning.

The curriculum described in this document has the following key features:

1. **It is defined in terms of *learning outcomes* rather than objectives or allotted time.** *Outcomes* are the observable/measurable knowledge, skills, and values that students are expected to have acquired and developed at certain key stages of their schooling. They describe what students should know, should be able to do, and should value as a result of their learning experiences.

   The outcomes in this document shall form the basis of the programs, learning activities, and specific outcomes that school boards develop for each grade.*

2. **It is designed for all students; that is, a school's programs must accommodate the various abilities, needs, and interests, as well as the differing racial and ethnocultural backgrounds, of all the students in the school.** Each class will include students with a wide variety of experiences, strengths, and needs.

3. **It is holistic in its view of an increasingly complex and interdependent world; that is, it places emphasis on connections and relationships – relationships among ideas, among people, and among phenomena.** In keeping with this view, subject matter and outcomes are organized into broad program areas rather than traditional subject disciplines.

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*Roman Catholic separate schools are constitutionally protected denominational schools and are responsible for their own religious education programs and outcomes.

4. **It requires that programs at the school board and school levels be planned collaboratively by staff, students, and the community to ensure that local needs are met.** Schools may organize their programs and work towards achieving the stated outcomes in a wide variety of ways in order to accommodate the varying needs of their students.
5. **In emphasizing outcomes, it provides a basis for evaluating student achievement and program effectiveness.** Ongoing assessment will provide the basis for modifying programs and methods of instruction to better meet the needs and interests of individual students.

The term *common curriculum* encompasses ten essential cross-curricular learning outcomes, more specific learning outcomes organized under the four interrelated core program areas, and all the learning experiences designed by schools to enable students to achieve these outcomes by the end of Grade 9. All of the students' experiences in school should contribute to the achievement of the outcomes of the common curriculum.

Education in Ontario is founded on a commitment to: **accountability, excellence, equity,** and **partnership.**

> A commitment to **accountability** means a commitment to ensuring that the essential cross-curricular outcomes of the common curriculum are met, and to communicating to students, parents, and all those with an interest in education how well our school system meets established standards of student achievement.
>
> A commitment to **excellence** means a commitment to high standards of achievement in our schools. More specifically, it means ensuring that all students attain, to the highest level of which they are capable, literacy, numeracy, and the other knowledge, skills, and values they will need for personal fulfilment, lifelong learning, effective functioning in the world of work, and full participation in society.
>
> A commitment to **equity** means a commitment to social justice. This includes a commitment to removing established barriers and biases in school policies, programs, and practices so that the intended learning outcomes may be achieved by students of all societal groups, including those that have been traditionally disadvantaged.
>
> A commitment to **partnership** means a commitment to rooting our schools more firmly in the communities they serve and recognizing that responsibility for education in Ontario is shared by the ministry, teachers, students, parents, school trustees, and business, labour, and community organizations.

The curriculum outlined in this document is based on the recognition that societies are not static – that they change and evolve in response to events occurring at the local, national, and global levels. Schools must respond to these changes and the consequences that they have for students. For example, when Canada's economy was largely based on its natural resources, agriculture, and manufacturing, education was but one avenue to becoming a successful citizen. However, as Canada's economy becomes more and more dependent on service- and technology-based industries, education is becoming increasingly essential for success in all areas of endeavour; in fact, it is already difficult to play a productive role in our society without it. It is therefore extremely important that we give our young people the motivation and the opportunities to acquire the kind of education that will enable them to live productive and satisfying lives.

Our society is currently undergoing far-reaching changes in the structure of families, in the composition of the population, and in the nature of the economy. Other trends, such as the information explosion, the impact of new technologies, changes in the workplace, the increasing fragility of the environment, and concerns about changes in the values and institutions that have formerly been a source of stability in our society all dictate a review of traditional models and approaches in education. Responding successfully to these changes and to changes in the student population – including the influx of adults who are returning to continue their education – requires new ways of thinking about and organizing curriculum.

The increasing pace of change of all types means that today's and tomorrow's citizens need to be effective lifelong learners, capable of responding constructively not only to conditions we can foresee, but also to those we have not yet imagined. They need the ability to use both traditional and innovative means of learning, including up-to-date technologies, to achieve personal growth and satisfaction, become productive and adaptable members of the work force, deal with changing family structures and responsibilities, and participate effectively in the life of the community and of society in general. Most fundamentally, they need to view education as a continuing process in their lives – a means of identifying and solving problems creatively and of planning effectively for the future.

The purpose of this document is to provide the policy direction needed to design educational programs that will meet these needs. Part I outlines the educational principles that underlie the ministry's approach to curriculum. Part II describes the ten essential cross-curricular learning outcomes that all students are expected to achieve by the end of Grade 9. Part III describes the four core program areas and their general outcomes, which enable students to achieve the essential cross-curricular learning outcomes. Part IV provides more specific learning outcomes to be achieved by the end of Grades 3, 6, and 9, for each of the four core program areas.

Ontario is fortunate to have a dedicated teaching force that is actively involved in the creation of schools that can meet the challenges of the twenty-first century. This document was developed with the assistance of such educators and describes practices that are already in place in some school-board jurisdictions. It provides school boards and schools with the guidelines they need to plan programs that are more relevant and more responsive to current as well as anticipated conditions and needs. Curricular change should be seen as an ongoing process through which educators continually review their practices and modify them to better meet the needs of their students, communities, and society.

PART I

Principles Underlying Education for Grades 1 to 9

The view of curriculum described in this document is based on the following principles of education found in current research and literature on learning, teaching, curriculum organization, and assessment and evaluation. Many of these principles are already familiar to Ontario teachers and are being applied in some form in the teaching practices of the province's schools.

Principles Underlying Learning

1. **Learning involves values as well as knowledge and skills.**

   Values are qualities that people, as individuals and groups, consider important as principles of conduct and as major aims of existence. Personal values influence attitudes, decisions, and behaviour, and affect interpersonal relationships. Societal values shape individual values and behaviour and are in turn shaped by them. Societal values influence laws, social norms, and institutions.

   Children and youth develop their values and attitudes through socialization, by recognizing and internalizing the implicit and explicit messages they receive from their environment. Parents, siblings, peers, the media, and the school have a powerful influence on children's perceptions and behaviour and the beliefs they develop about others and themselves.

   While schools do not have the predominant role in the development of values in children and youth, they do have a clear responsibility to address the values implicit in all curriculum. Schools cannot be value-neutral. The values that form the foundation of the curriculum described in this document are those that the majority of Canadians hold and regard as essential to the well-being of their society. These values transcend cultures and faiths, reinforce democratic rights and responsibilities, and are based on a fundamental belief in the worth of all persons and a recognition of the interdependence of all human beings and the environment.

   All students need to develop a positive sense of self and respect and concern for others. It is also important for students to develop a sense of belonging in the community, a sense of social responsibility, a commitment to democracy and human rights, and a love of learning. An education based on democratic principles ensures not only that students are exposed to different points of view on issues, but also that they learn to recognize biases and explore different philosophical positions as part of the process by which they develop and reflect on their personal value systems.

2. **Learning involves active inquiry into interrelated topics and issues.**

   Effective learning involves actively constructing the meaning of one's world. The events, problems, and situations one encounters in daily life are not experienced as discrete phenomena; rather, they are experienced holistically. Similarly, curriculum that responds to the requirements of daily life should be presented in a way that emphasizes relationships among ideas, people, and phenomena and that recognizes the importance of integrating knowledge, skills, and values.

   The process of actively constructing meaning occurs most effectively when learners are encouraged, individually and in groups, to explore phenomena in their natural and social environments; to formulate questions for inquiry; to seek answers through observation, experiment, creative art, research, and consultation with those more knowledgeable than themselves; to present, explain, and justify their conclusions; and to evaluate both the process and the outcomes of their inquiries through discussion with their peers and teachers. Similarly, the development of understanding, knowledge, skills, and values in the core program area of Mathematics, Science, and Technology is best achieved through relevant problem-solving activities. In all core areas, an inquiry-oriented program can give learners opportunities to observe, investigate, and analyse concepts and problems, and to create and assess solutions.

3. **Learning involves effort and self-discipline.**

   Although learning often takes place in interaction with others – and is greatly facilitated and enhanced by such interaction – each individual learner is ultimately responsible for his or her own learning. Teachers therefore need to motivate students to set high expectations for themselves and must constantly encourage them to achieve their best in an attempt to help them take greater control of their own learning. Whatever their particular abilities, students must understand that there is a direct connection between disciplined effort and achievement, both in the school and in the world of work. In stressing the importance of work and self-discipline in all areas of the curriculum, teachers should help students realize that sustained effort will not only achieve academic goals but bring increased satisfaction, self-esteem, and enjoyment of future tasks.

4. **Learning is cumulative and builds on existing knowledge, skills, and values.**

   Learning and developing understanding is a cumulative process and occurs over time through a variety of experiences in different environments. To be meaningful, school programs must respond to the diverse experiences that students bring to school. Approaching learning in this way enables the teacher to provide appropriate guidance for each individual student. Students learn most efficiently when they are presented, in an emotionally supportive setting, with tasks that challenge them to move just beyond their current levels of skill and understanding.

   Students must be encouraged, at appropriate moments in their learning experience, to reflect on the process of learning so that they may understand how they learn and assume responsibility for learning.

5. **Individuals differ from one another in their styles and rates of learning.**

   Individual students learn in different ways and at different rates. They differ, therefore, in the paths that their development follows. Teachers should continually monitor and assess students' progress so that they can make the necessary adjustments in their teaching methods to respond more closely to individual students' learning needs. All students should be given the time and resources they need to reach their potential.

Principles Underlying Teaching

1. **A variety of teaching methods are needed to respond adequately to the wide range of student backgrounds, needs, and abilities represented in the classroom.**

   Teachers need to use a variety of instructional methods to enable students of a wide range of backgrounds, abilities, interests, and learning styles to learn effectively. Of particular importance are teaching methods and learning activities that encourage supportive relationships among students. Such methods acknowledge and promote respect for individual students' backgrounds, strengths, and unique contributions. Students of all backgrounds will benefit from opportunities to work in groups in an atmosphere of co-operation and mutual respect. Such opportunities will not only foster learning and the development of effective interpersonal skills, but will also lead students to understand and value the contributions of people from a wide variety of backgrounds.

   Class, small-group, and individual learning activities continue to have an important place in the repertoire of teaching practices.

2. **Teaching methods should emphasize active inquiry and the making of connections between ideas.**

   Students learn most effectively when they are encouraged to adopt an inquiring attitude and are helped to formulate their own questions and to seek answers to them by appropriate means. Students also need encouragement and assistance in establishing and defining relationships between the ideas they encounter in different areas of their program, and between ideas and their own experiences and values, particularly those relating to the family, peers, the community, the environment, and society. All teaching should reflect a holistic view of life and experience in a world of complex and interrelated phenomena. Teachers should be ready to make relevant connections between ideas and experiences in response to students' needs.

3. **Integrated teaching methods are best developed through collaborative exploration by all members of the school community – principals, teachers, other school staff, students, parents, and all those in the community who have an interest in education.**

   The most successful teaching methods will emerge from a collaborative process in which teachers are given the freedom to investigate, test, and assess various methods and to draw upon each other's resources and those of the community. The search for creative ways of implementing a holistic view of curriculum and learning should involve all members of the school community. Decisions about how and when to use specific teaching methods should be based on the methods' usefulness in helping students to achieve specific outcomes of the common curriculum.

Principles Underlying Curriculum

1. **All of the students' school-related experiences make important contributions to learning.**

   In general, the curriculum comprises all of the students' school-related experiences. It includes program content and all the activities and experiences derived from it; learning resources; teaching strategies; procedures relating to discipline and evaluation; and the interactions of staff, students, and others in the course of school activities.

   Curriculum also includes experiences that derive from social interaction in the classroom, the school, and the community at large. Peer relationships and informal interactions with school staff and community members have an important bearing on students' attitudes and values. Such interactions occur in a variety of settings, including the classroom, halls, lunchroom, playground, and school bus, and during co-curricular activities.

   Principals and school staff need to continually review school policies and practices to ensure that all aspects of the school environment, operation, and programs, including learning resources, are free of bias and enhance the ability of every student to achieve the essential learning outcomes of the common curriculum.

2. **Preparation of students for the modern world requires integrated programming.**

   Because issues in the modern world are interrelated in complex ways, students need to develop a broad understanding of ideas and phenomena and their interrelationships, as well as knowledge and skills that they can apply in a wide variety of subject areas and contexts. The shift in curriculum emphasis to more integrated programming and active, inquiry-oriented learning is intended to assist schools in providing every student with opportunities to develop the independent problem-solving abilities and the knowledge, skills, and values required for effective living in a rapidly changing world.

   The core program areas identified in this document reflect an integrated view of subject matter and student development. Curriculum for the core areas should reflect both the distinctive character of each area and the interrelatedness of the four areas.

3. **Curriculum must be adaptable to ensure that it is relevant and responsive to changing needs and circumstances.**

   If curriculum is to provide the opportunities for students to develop the knowledge, skills, and values they will require for effective living in the twenty-first century, it needs to be adaptable and responsive to students' changing needs and circumstances. All those responsible for program planning must ensure that programs are relevant for the students for whom they are designed and that they reflect current and anticipated requirements. Only programs that are designed to be adaptable can continue to be relevant in an age of rapid change.

Inherent in this notion of curriculum is a view of learning as an active, inquiry-oriented process in which the learner develops knowledge, skills, and understanding by defining and solving problems creatively. Teachers, students, parents, and the community need to work together to ensure that this view of learning is effectively promoted and reinforced through all of the students' learning experiences since it underlies the goal of lifelong learning.

4. **The curriculum shall be free of bias and shall reflect the diverse groups that compose our society.**

   Students' self-image, as well as their perceptions of others and attitudes towards them, is affected both by what is taught and by how it is taught. All students are entitled to have their personal experiences and their racial and ethnocultural heritage valued within the context of a society that upholds the rights of each person and requires each person to respect the rights of others. All students must, therefore, see themselves reflected in a curriculum that acknowledges both the diversity and common aspirations of the various peoples that make up our pluralistic society.

   What is taught in schools must represent an authentic picture of reality. The curriculum must reflect the variety of peoples and cultures in Ontario and Canadian society and accurately reflect the contributions and accomplishments of men and women of all races, cultures, religions, ages, abilities, and backgrounds.

5. **Individuals' strengths, needs, and backgrounds need to be recognized through appropriate learning activities.**

   Individual students have unique backgrounds, strengths, and needs. Effective teaching and learning methods and relevant resources enable every student to meet the requirements of the common curriculum to the best of his or her ability. At the same time, students need a range of learning activities through which they can develop their personal strengths and pursue their interests. Such activities will allow students to develop, as well as explore in greater depth, those aspects of the common curriculum that have particular relevance for them.

Principles Underlying Assessment and Evaluation

1. **Assessment of student learning is an integral component of Ontario curriculum and effective classroom practice.**

   Assessment must be based on clear statements of expected outcomes. To be effective, assessment and evaluation must be a continuous and ongoing process involving the individual student and his or her peers, teachers, and parents.

Teachers will use the results of the evaluation of student achievement to assess the effectiveness of programs and their classroom practices, and to make modifications in these practices that will enable all students to achieve the intended outcomes. The results of the evaluation of student achievement will also form the basis of reports concerning student progress.

2. **Teachers need to employ a wide variety of assessment methods that are consistent with the instructional approaches used and appropriate for describing student achievement.**

   Teachers need to use both quantitative and qualitative methods of assessment in order to reflect the breadth, depth, and complexity of the learning outcomes of the common curriculum. These methods should encompass all aspects of student learning and should be appropriate for the ages and levels of maturity of the students. The use of a variety of methods and procedures has the added benefit of giving students a range of opportunities for demonstrating their progress.

3. **The evaluation and reporting of student achievement is the task of the teacher, who must consider the special requirements of individual students and work in consultation with them and their parents.**

   Evaluating the effectiveness of students' learning and choosing assessment tools that are appropriate to what is being evaluated require the application of professional judgement. At the same time, it must be recognized that all assessment and evaluation activities have a subjective dimension. For this reason, it is particularly important that teachers tailor their assessment methods to the particular requirements and circumstances of individual students. This means taking into account their cultural, linguistic, and socio-economic backgrounds, as well as their special needs and abilities. The use of a variety of appropriate assessment activities on an ongoing basis will ensure that all these requirements are accommodated, and that a comprehensive record of student progress and achievement is maintained.

   It is important that teachers solicit and consider the views of students and parents when making decisions about students' requirements.

4. **The evaluation of school programs should effect improvement and should be based on school board and provincial standards.**

   Teachers and principals will determine the overall effectiveness of programs by evaluating students' results with reference to the performance of all the students in the program within the school, in other schools of the board, and in relation to the standards established in the provincial benchmarks. This process will ensure that achievement of standards is monitored and reported as objectively as possible. The information obtained will be used to improve programs and will have the effect of enhancing student achievement by promoting high standards in all areas of learning and teaching.

   Provincial review procedures will provide information on student achievement which can be assessed in relation to provincial benchmark standards in some areas of the curriculum.

PART II

Ten Essential Cross-curricular Learning Outcomes

The common curriculum provides a basis that allows schools, in co-operation with parents and other members of the community, to enable all students to develop the knowledge, skills, and values they will need for a life of personal fulfilment, responsible citizenship, and full participation in society. It is expected that school programs at all grade levels and the activities that flow from them will enable all students to achieve the **ten essential learning outcomes** outlined below, to a degree commensurate with their individual ability and stage of development. These outcomes are cross-curricular in nature and must therefore be considered the responsibility of all teachers. For example, the goal of enabling students to use language to think, learn, and communicate effectively is to be actively pursued at all grade levels and in all program areas.

While it is recognized that these cross-curricular outcomes will continue to be developed and refined throughout life, students should achieve them, by the end of Grade 9, to a level that will enable them to:

- function effectively in everyday life; and
- pursue appropriate further studies of their choice.

It should be noted that the ten cross-curricular outcomes are not listed in order of importance; all are considered essential for effective learning, living, and working in the twenty-first century.

By the end of Grade 9, students will:

- **be able to use language to think, learn, and communicate effectively in a variety of contexts and curriculum areas;**
  Students will demonstrate proficiency in using language, both spoken and written, for a variety of purposes, as well as an understanding of the functions and forms of language.
- **be able to employ mathematical knowledge and skills to solve practical problems;**
  Students will have developed an understanding of mathematical principles and their application, and the skills and values required to apply this understanding in a variety of contexts in everyday life.
- **be able to use scientific methods to solve problems, and apply scientific perspectives to better understand their world and make responsible decisions;**
  Students will have developed an understanding of scientific principles and methods and their application, and the skills and values required to apply this understanding in a variety of contexts in everyday life.

- **be able to evaluate and use a wide variety of technologies to improve their performance in school- and work-related areas and generally enhance the quality of life;**
  Students will have developed an understanding of the uses of various technologies, and the skills and values required to make effective use of these technologies in the workplace as well as in appropriate contexts in everyday life.
- **demonstrate an understanding of how history, geography, and cultural forces have shaped the past and the present, and be able to apply this understanding in planning for the future;**
  Students will have acquired a knowledge of history and geography and developed the skills and values required to apply this knowledge to the analysis of events, developments, and future trends in Canada and the world, as well as to the understanding of diverse cultural and socio-economic perspectives.
- **demonstrate a commitment to peace, social justice, and the protection of the environment, and apply a global perspective in both their attitudes and behaviour;**
  Students will have developed an understanding of global and environmental concerns and their implications, both for individuals and various groups and societies throughout the world, and will demonstrate a commitment to social justice and the preservation of the environment.
- **be able to interact and work effectively with others, demonstrate respect for human rights, and be motivated to fulfil the responsibilities of citizens in a democratic society;**
  Students will demonstrate an understanding of and support for the democratic principles that underlie our society and be motivated to live and work co-operatively with others and participate responsibly in society.
- **value work and learning of all types not only for their practical benefits but also for the sense of purpose and satisfaction that they can bring, and be able to develop relevant, well-prepared plans for entering the work force or continuing their education;**
  Students will demonstrate an understanding of both the material and psychological benefits of work and learning and an appreciation of their importance for individuals and society as a whole.
- **be able to exercise aesthetic judgement in relevant contexts and to apply aesthetic standards to many facets of life and work;**
  Students will demonstrate an understanding of aesthetic principles and their application in the arts as well as other areas of life, and the ability to apply this understanding to enhance both personal expression and perception.
- **be motivated to build healthy lifestyles and relationships.**
  Students will demonstrate an understanding of the role of personal health in our lives, the ability to make wise and safe choices for healthy living, and a commitment to relationships based on mutual respect and caring.

The development of these interrelated understandings, skills, and values is the responsibility of every member of the school staff and is the overriding purpose of the entire school program to the end of Grade 9. While it is acknowledged that some students will demonstrate learning difficulties that may delay the achievement of these outcomes or significantly affect the level at which they are achieved, the stated outcomes and the high standards they represent remain valid and realizable goals for the vast majority of Ontario students.

PART III

Four Core Program Areas

The curriculum includes four core program areas. They are:
- Language
- the Arts
- Self and Society
- Mathematics, Science, and Technology

Each of the core program areas contributes to the achievement of the ten essential cross-curricular learning outcomes in its own distinct ways and through its own set of learning outcomes. These outcomes are statements of observable/measurable knowledge, skills, and values that learners are to acquire and develop by the end of Grade 9.

To demonstrate the connections between ideas, people, and phenomena, those developing curriculum should focus on broad program areas rather than narrowly defined subjects and disciplines. For this purpose, several traditional disciplines or subjects have been integrated within each core program area as well as developed across these areas. Although the organizational structure described in this document is recommended, schools may choose other ways of organizing programs to assist the learner in understanding that knowledge, skills, and values are interrelated and to enable all students to reach the stated outcomes.

School programs must enable students to connect their learning to their own experience. The curriculum must, therefore, show sensitivity to the racial, linguistic, and ethnocultural composition of the student population and reflect community needs. The development of programs that both meet these needs and achieve the core program outcomes identified in this document is the responsibility of teachers and other staff within schools and school boards. The emphasis on local planning is intended to ensure that the curriculum is as responsive to local needs and conditions as possible and that it is developed in close co-operation with the community which it serves.

In some instances, support services will have to be provided and time requirements adjusted to assist those students who are experiencing difficulty in achieving the stated outcomes to the best of their ability.

Descriptions of the four program areas and their interrelated components are followed by general learning outcomes for each component.

Language

The goal of all language teaching in Ontario schools is to help students to develop a high degree of facility in using language for a variety of purposes. Well-developed language skills enable students to communicate in both social and academic contexts and are essential for the lifelong learning required to live and work in a changing world. Language learning should also enable students to develop both a positive sense of personal and cultural identity and an appreciation of languages and cultures other than their own.

Language and Learning

Language is central to intellectual, emotional, and social development. We use language to think, acquire knowledge, shape and assess our values, and communicate. Language is also a fundamental component of personal and cultural identity.

Language develops as we use it purposefully in different contexts. In considering the process of language development, it is useful to identify two basic aspects of language proficiency. The first relates to the basic communication skills; these are the skills we develop in order to meet our personal and social needs in daily life. When the topic and language of communication are familiar and the context clearly defined, little analysis is needed to grasp the meaning; these basic communication skills are sufficient to enable us to understand what is being communicated and to communicate our response.

The development of communicative competence in a variety of contexts and styles and for a range of purposes is a central concern since it serves as a foundation for the second aspect of language proficiency. This aspect relates to the use of language for learning and thinking. Students need to be able to use language for these purposes in order to develop creative and critical thinking skills and to learn in the various content areas – that is, to function effectively in academic contexts. More specifically, learners need this type of proficiency to grasp concepts and express ideas in formal writing as well as in more structured oral forms such as debates, speeches, and presentations. As learners progress, they engage in learning processes and tasks that demand increasingly more complex analysis. The language functions and forms students use must continually develop and expand to reflect this increasing complexity.

Among the creative and critical thinking and linguistic skills that students develop is the ability to talk, write, and think about language itself. Reflecting on language and its uses in different social contexts further enhances students' language awareness and enables them to value varieties of their own language as well as a variety of different languages as vehicles of communication and cultural expression. This positive awareness of the communicative and cultural value of language encourages students to develop and extend their repertoire of language functions and forms and thereby enhance their ability to learn a language, learn through language, and learn about language.

Students develop the ability to use language for learning and thinking through the process of obtaining information, interpreting it, and communicating this interpretation to others. In order to see the information they gather as meaningful, students need not only to connect it to their own experience and feelings but also to talk and write about it using the language they control. To assist students to do so, the texts and learning materials they encounter should reflect society's diversity in a bias-free manner, and learning experiences should take place in a setting in which the students' own language and cultural experience are valued.

Students also need frequent opportunities to articulate what they have learned from their reading of a text and to share it with others in order to clarify, assess, and extend their interpretations as well as refine their aesthetic appreciation of the text. The exchange of ideas and views will lead students to analyse the issues raised and to express their responses to these issues or to the aesthetic aspects of a text through a variety of activities. They may, for instance, decide to articulate their position on an issue in a letter to a newspaper or to express their aesthetic appreciation in a poem or dramatization. Such purposeful writing for an audience helps students to clarify their ideas, strengthen their command of language styles and conventions, and expand their repertoire of stylistic/rhetorical strategies.

Language is intrinsically cross-curricular, and opportunities to develop language facility must be provided in every component of the curriculum. When new materials and concepts are introduced, students should be helped to develop ways of thinking that are appropriate to the curriculum area. Students need to learn how to listen with a purpose, to talk about a subject in a meaningful way, to develop reading strategies that allow them to make effective use of a wide variety of print and non-print materials, and to develop writing strategies and skills that advance their learning and meet the specific language and conceptual requirements of particular curriculum areas. In developing and learning to apply these strategies, students come to realize that the various curriculum areas and types of texts make different language demands and so require different competencies.

Literature and the Curriculum

The literary text continues to play an important role in education, alongside a variety of other "texts" that contribute to the development of literacy and critical thinking skills in our multimedia culture. The purposes for granting literature an important place in the curriculum include the following:

- Literature allows students to experience emotions and situations vicariously, in a context in which they are free of the restrictions of the real world and the demands of their everyday life. Such vicarious experiences allow students to contemplate and assess a range of emotions, motives, and actions and to probe their moral and ethical dimensions in a "safe" and unrestricted context. Thus literature has the capacity not only to foster students' creativity and intellectual growth, but also to contribute significantly to their moral development.
- Literature has a vital role in the development of language and literacy. Poetry, drama, and the many varieties of prose offer students a rich range of language models and at the same time demonstrate both the power of language and the infinite possibilities it offers for

communicating ideas and experiences with eloquence and conviction. Literature is also a rich source of vocabulary, idioms, and ideas for students' own writing.

- Because literature has both the capacity to inform and the power to enlighten and persuade, it can make a unique contribution to the development of students' cultural awareness and understanding. Literature can not only acquaint students with the traditions, attitudes, and concerns of diverse cultural groups, but can actually make them experience situations and contemplate issues from their vantage points. Literature can thus give students a powerful insight into perspectives other than their own.

  Similarly, literature can lead to a better understanding of the experience of prejudice. Students who have experienced the effects of gender, class, or race bias directly or vicariously through literature are likely to adopt attitudes and forms of behaviour that promote respect for the rights of others and acceptance of differences.

First- and Second-Language Programs

Effective language programs build on the social, cultural, and linguistic experience that students have when they enter school. Young people in Ontario have a variety of first languages. It is important for both parents and educators to understand the relationship between the learner's first language and the development of school-based literacy; the student's linguistic competence in the first language is the foundation on which literacy in the language of instruction and other languages can be built.

Students whose first language is different from the school's language of instruction need opportunities to become as proficient in listening and speaking, reading, and writing the language of instruction as those whose first language is English or French. Research indicates that students need around two years' exposure to English to develop conversational skills. However, they need a much longer period of exposure – between five and seven years – to develop the language proficiency required to work with complex ideas and abstract concepts in another language and to function academically like native speakers of the language. Meaningful and relevant language-learning experiences and support programs are needed to assist them while they are developing communicative competence and the language proficiency needed for learning in the various content areas.

Learning languages other than their first language can be of significant educational benefit to students. Research in the field of language learning has confirmed that learning another language or several languages has positive effects for learners when they are allowed to maintain their first language. Improvements have been noted in such language skills as reading and writing, as well as in the capacity for conceptual thinking, appreciation of the importance of clarity of expression, and the ability to learn additional new languages. The benefits to society include better cross-cultural understanding and the development of a linguistic resource that can facilitate Ontario's and Canada's participation in the global economy.

Rationale for Language Learning Outcomes

The development of literacy is a central aim in education. To function effectively in today's and tomorrow's society, students must be literate not only in the traditional sense – that is, be able to read, write, speak, and listen effectively in at least one language – but also in the wider sense that includes literacy in the various technological media used for communication. Since these forms of communication are fast becoming the major means of accessing, assimilating, and communicating information in our world, the processes of reading, writing, speaking, and listening must be expanded beyond their traditional boundaries to include such print materials as graphics, pictures, and symbolic representations as well as the non-print multi-media "text" of television and film. References to "text" in this document, therefore, encompass both print and non-print materials, and references to reading, writing, speaking, and listening extend beyond their traditional contexts – for example, reading includes viewing, writing includes various forms of representing, speaking includes dramatizing, and listening includes responding.

These four language learning processes are interrelated and interactive: listening, speaking, reading, and writing inform, support, and reinforce each other. It is through ongoing engagement in these interactive language processes that learners develop language fluency. For the purposes of analysing these processes and formulating outcomes, they are briefly examined here individually.

Listening and Speaking

Although listening and speaking can be viewed as discrete processes, in communication they operate together as one process. This process is commonly referred to as "talk".

Speaking and listening develop from birth as interactive social processes – that is, as talk. Children learn to talk and talk to learn. As they acquire language and experience in various forms of communication, they use talk, accompanied by non-verbal communication, to imagine, to think creatively and critically, and eventually to reflect on language itself. Because of the importance of talk in learning and in the development of literacy, students must develop competence in interactive speaking and listening. They must also develop specific language skills related to effective thinking, learning, and communicating during their school years and throughout life – for example, the skills needed for critical listening, analytical thinking, and communicating in the more formal oral modes such as speeches and presentations.

Reading

Reading is essentially a problem-solving process. The reader interprets or constructs meaning from a text by applying language knowledge and meaning-making strategies, as well as personal experience, to it. When learners read often and read a variety of texts, they develop the ability to read increasingly complex and varied materials and to do so with deeper understanding and appreciation.

Writing

Writing is a complex process that involves the processes of thinking and composing, the consideration of audience and purpose, the use of standard written forms, and the use of conventions of language. Although the process of writing is recursive rather than linear, it has general identifiable stages: prewriting; drafting; and revising, editing, and polishing. The ways in which individuals work in and with these stages will, of course, vary. Students must have frequent opportunities to write for various purposes and audiences to develop proficiency in the skills related to the writing process as a whole as well as the skills related to the specific stages within the process itself.

General Learning Outcomes

Students will:
- be able to use language for a variety of purposes and in a variety of contexts;
- be able to use language to think and learn in a variety of curriculum areas;
- be able to use language to make sense of their own experiences and to share experiences with others;
- be able to use the conventions of language appropriately for the purpose, audience, and context;
- be able to use language to develop collaborative and independent thinking and learning strategies;
- be able to create practical and imaginative works in a variety of media, both as individuals and as members of a group.

The Arts

The arts develop the mind, nurture and reflect our spiritual aspirations, and thus enrich our experiences and enhance our capacity for self-fulfilment. From a broader perspective, the arts provide continuity with our past by stressing the universality of human experience and offer an inspiring record of human achievement that transcends barriers of race and culture. In a world of rapid and widespread change, these traditional functions of the arts take on new significance and provide the context for making education in and through the arts meaningful for students.

Dance, drama, music, and the visual arts are expressions of the ideas, values, and concerns of individuals and societies. It is therefore important for learners to become literate in the arts – to develop an understanding and appreciation of the creative process and of the principles and techniques that serve the creative purpose in individual disciplines. In learning to understand the arts as a means of expression and communication and in creating their own art works, students expand their repertoire of communicative strategies. The skills and aesthetic judgement that students develop through their study of the arts can be applied in many other areas of endeavour and will enrich their perception and enjoyment of many of the experiences they will encounter in daily life.

Various approaches to the study of the arts are possible. The four broad topics identified in the following outline focus on the form, meaning, and function of the arts and on the creative process through which works of art are produced. Although they are discussed here separately, these aspects are interrelated; in most cases, students will encounter and learn about all four aspects simultaneously.

Understanding Form in the Arts

In investigating the form of artistic works in dance, drama, music, and the visual arts, students learn to identify the elements of a work of art and the way in which these elements are arranged to make a meaningful whole. For example, in the visual arts, elements such as line, colour, and texture may be combined into patterns organized according to various compositional principles. In dance, movement is shaped by rhythm and pattern. In music, sounds and rhythms are combined into different patterns through variations in tempo, pitch, and dynamics. In drama, human motivation and character are revealed through speech and action in sequences of events whose structure and patterns resemble those found in the other arts and in literature.

Students come to understand the concept of form in general as they learn to analyse the artistic form of particular works in each of the arts. The arts are closely interrelated and share many formal characteristics, such as pattern, texture, rhythm, and overall structure. An understanding of form in one artistic discipline, therefore, is often useful in understanding form in another.

General Learning Outcomes

Students will:

- be able to recognize and describe the form and aesthetic qualities of art works from each of the arts, as well as the aesthetic qualities of objects and materials in the natural and human-made worlds;
- be able to discuss the use of elements, techniques, and concepts in each of the arts, using appropriate terminology.

Exploring Meaning in the Arts

Along with a knowledge of art forms in general and the ability to perceive the form and aesthetic qualities of particular works of art, students also need to learn to identify and describe the effect of a work, to interpret its meaning, and then to evaluate the significance or validity of the ideas expressed and the effectiveness with which they are communicated.

Students learn to consider their own responses to a work and the elements in the work that evoked those responses. They also consider and try to account for the opinions and interpretations of others (including, perhaps, those of the artist) and through this process clarify, expand, and deepen their own understanding of the work.

General Learning Outcomes

Students will:

- be able to describe their sensory, emotional, and intellectual responses to works in each of the arts and offer an interpretation of the meaning of the works;
- be able to consider a variety of other responses to and interpretations of the works, as part of the process of reflecting on and refining their own opinions;
- be able to recognize and promote excellence and originality in performance and presentation;
- be able to explore and express ideas and feelings through the arts, and appreciate the ideas and feelings expressed in art works by others.

Understanding the Function of the Arts

Works of art have a function for both the artist and the audience. Through a particular art work or body of art works, the artist expresses ideas and feelings about human experience and the world. For the artist, then, the work of art is a means of expression and communication.

Works of art appeal simultaneously to the senses, the emotions, and the intellect, and thus evoke a complex response from their audience. They enrich people's experience by heightening sensory awareness and by prompting them to clarify and restructure personal perceptions. Works of art also provide insight into the different places, times, and cultures that produce them; they both illuminate and are illuminated by their political, social, cultural, and economic context. In studying works from different cultures, the focus should be not only on the range and variety of artistic themes and forms, but also on the connections and shared elements that demonstrate the universality of much of human experience. Students can thus begin to understand the important role of the arts in fostering continuity, communication, and connection among individuals and groups.

General Learning Outcomes

Students will:

- be able to derive personal enjoyment and intellectual and emotional enrichment from participation in the arts;
- be able to relate experiences in the arts to their personal perceptions and circumstances in order to deepen their insight into their own thoughts and lives;
- have a deeper understanding of other people, places, times, and cultures;
- recognize ways in which works of art are influenced by and illuminate the political, economic, cultural, and social milieu and the environmental conditions of the time when they were created;
- understand the connections among individuals and groups and appreciate the universality of human experience through study of the arts.

Communicating Through the Arts

Students' ability to understand, interpret, and appreciate works of art should be complemented by knowledge of the creative process through which a work of art is produced. Students' developing ability to analyse and understand works of art will support and nourish their ongoing efforts to create their own works of art. At the same time, as students become familiar with the tools, materials, processes, and techniques required to create their own works, they will develop a deeper understanding of the achievements of artists whose works they are studying. The academic and practical aspects of the program thus logically complement and reinforce one another.

General Learning Outcomes

Students will:

- be able to use a variety of tools, materials, processes, and techniques in each of the arts to create works of their own that show an understanding and appreciation of aesthetic principles;
- understand and be able to use appropriately symbols, signs, graphics, and other technical means of expression in each of the arts;
- be able to explain the relationship between the structural and aesthetic qualities and the intended meaning of their own art works;
- be able to set personal goals for their learning and/or production in the arts, and monitor and evaluate their progress.

Self and Society

The starting point in the Self and Society program area is the student as an individual, with particular abilities and interests. From this point the focus broadens to encompass society at the local, national, and global levels and the individual's relationship to it. The Self and Society program area integrates several traditional areas of study, including business studies, family studies, geography, guidance, history, and physical and health education. It should be noted, however, that aspects of these traditional subjects are also developed in other core program areas and that outcomes related to these traditional subjects may therefore also be found under other core program areas.

Students begin by examining their own aspirations, abilities, and needs. Important themes include the physical, emotional, and mental changes students experience at different stages of their development, their relationships with family and peers, and the need to take responsibility for their personal well-being and that of others. A central goal of the program area is to enhance students' understanding of the aims and functions of their society and of their possible roles in it, now and in the future. This in-depth exploration of the fundamental aspects of society includes an investigation of the interactions of government, labour, and business.

As the focus expands to an examination of other societies, students learn about the diversity of humankind and come to understand, appreciate, and respect their own and others' points of view and ways of living. They investigate various types of social, political, economic, and environmental systems as a way of developing coherent insights into the world's complexities and interdependencies. They explore the nature and special requirements of our information society. They also examine the causes and impact, for individuals and societies, of the many changes taking place throughout the world and develop the skills and attitudes that will enable them to function effectively in this complex and changing world. These include the ability to adapt to change, the willingness to continue learning throughout one's life, effective interpersonal skills, creative problem-solving skills, and adaptable entrepreneurial and technological skills.

The students' expanding knowledge of self, growing understanding of others and the world, and acquisition of life and career skills complement one another and help them to identify and evaluate their current and potential contributions to society.

The Self and Society program area encompasses five broad topics: Meaningful Participation: The Individual in Society; Understanding Diversity; Understanding Natural and Human-Made Systems; Functioning in the Age of Information; and Understanding and Managing Change.

Meaningful Participation: The Individual in Society

Students' present and future participation in society develops out of their expanding knowledge of themselves as private individuals and as individuals with a role to play in the family, the community, the nation, and the world. Students' increasing awareness of their own strengths and aspirations enables them to set goals and determine their needs for further learning. Students should be encouraged to value all types of work and the kinds of learning associated with them. In order to formulate realistic goals and work out practical plans for achieving them, students need to understand that aspects of their identity (physical, intellectual, emotional, spiritual, social, cultural) may affect their chances of achieving certain aims. Students also need up-to-date information on the educational and career opportunities related to their goals, and on the legislation, programs, and organizations that exist to protect and support people in the workplace.

In order to take responsibility for their personal well-being, students need to learn about factors that contribute to a healthy, active lifestyle and positive relationships. To develop concern for others and a commitment to the welfare of society as a whole, students need to learn, through concrete examples, that individuals can make meaningful contributions at the local, national, and global levels, and they need to explore the means available for translating ideas into action. In addition, they need to encounter positive role models with whom they can identify.

Students need learning activities that allow them to visualize and assess a variety of possibilities for their own future and that of society. They should also have opportunities – and the kind of supportive learning environment – that encourage them to accept challenges and take risks, and so learn from both successful and unsuccessful experiences.

General Learning Outcomes

Students will:
- be able to visualize and evaluate possible futures for themselves and their world;
- be able to use knowledge of their strengths, interests, and aspirations to set goals and undertake educational and career planning;
- understand how aspects of their personal identity may affect their opportunities for realizing their personal and career goals;
- know what means are available for achieving their goals;
- understand how career/occupational choices affect all aspects of a person's life;
- recognize the ways in which global and environmental issues and factors may affect their career and lifestyle opportunities;
- be able to use relevant information to make responsible personal choices about health, lifestyle, and relationships, and value participation in group and individual physical activities;
- know about and be able to use a variety of learning and decision-making strategies;
- be willing and able to resolve conflicts in a co-operative and non-violent manner;
- be willing and able to contribute to social change through peaceful, democratic action.

Understanding Diversity

An important aim of education is to provide students with the knowledge, skills, and values they will need to help create and preserve a just society. A positive sense of self and concern for others are the natural starting points for the development of such values. From this basis they will learn to find common ground and work co-operatively with people from many different walks of life. The study of their own history, culture, and linguistic background and of the backgrounds of others in the community, province, and country helps students to develop an understanding of their roots, pride in their cultural heritage and identity, and awareness of the contributions that men and women from diverse ethnocultural and racial groups have made to the development of Canada and the world. The study of history and geography and the interrelationships between them also helps students begin to understand, among other things, political and social conflicts and movements, as well as the ways in which people's needs and aspirations have been, and often still are, shaped by such variables as gender, disability, race, location, and socio-economic, cultural, and religious background.

Students also need to understand the principle underlying respect for diversity: the right of individuals and groups to pursue their aspirations within the framework of a democratic society, while respecting the laws of society and seeking to make a positive contribution to it.

General Learning Outcomes

Students will:
- know about and value the contributions of people from a wide variety of cultures, races, religions, socio-economic backgrounds, and abilities, in the school, the community, Canada, and the world;
- understand and appreciate the similarities and differences among various peoples;

- appreciate both their own uniqueness and worth and those of every individual, including elders and people with special needs;
- understand and appreciate the experiences of people who have successfully faced various challenges;
- understand the influence of cultural and family traditions on the choices and decisions made by individuals and groups;
- know about the history of Canada and understand the perspectives of the different groups who played a part in that history;
- understand how differing climatic conditions, geographic features, and natural resources in various parts of Canada affect the choices that people, businesses, and industries make with respect to settlement and location;
- understand and acknowledge the rights of individuals and groups and be willing to carry out their responsibilities as citizens in the home, school, community, and workplace, and to work to bring about a more just society.

Understanding Natural and Human-made Systems

Humans have traditionally sought to understand the world by grouping and describing interrelated things in an organized way. Such groupings of interrelated things are known as *systems*. The world itself may be seen as a large system composed of many smaller, complex, interrelated systems. Some of these systems have developed naturally; others are of human design.

By investigating various types of systems, and the relationships among them, students begin to see the many complex and interdependent aspects of our world in a coherent way. They learn about a broad range of natural and human-made systems, operating locally and globally. These include, among others, climatic, environmental, social, economic, political, cultural, and technological systems. In investigating such systems, students should have opportunities to consider implications for individuals and groups, including themselves and their roles and responsibilities in society in the present and the future.

General Learning Outcomes

Students will:

- understand and appreciate the relationship between Canada's land and its peoples – in the past, the present, and a variety of possible futures;
- understand the interdependence of people within a society and among societies within the global community;
- recognize power relationships in groups, society, and the international community and assess their causes and impact;
- understand the nature of Canada's relationships in the global community;
- understand the structures and functions of institutions and governments in their community and in Canadian society;
- understand and appreciate the role of business, industry, and labour in their locality and in Canada;

- understand and appreciate the ways in which culture may influence the ideas and behaviour of individuals and groups;
- understand the influence of technological developments on education, work, and leisure.

Functioning in the Age of Information

New technologies for gathering, storing, processing, and transmitting information have contributed to the "information explosion". Vast amounts of material are now available on any topic. Because the ability to use information resources effectively and responsibly is essential for successful participation in today's and tomorrow's world, students need to develop a variety of technological and thinking skills that will enable them to acquire, evaluate, select, and use information in an effective and ethical way.

General Learning Outcomes

Students will:
- understand that the ability to gather, evaluate, and use information is an important life skill in a technological society;
- be able to access, organize, process, and evaluate information from a variety of sources in an effective manner;
- understand ethical and legal issues related to the use of information and develop responsible and ethical practices with respect to information management;
- understand the role and recognize the importance of technology in managing information;
- be able to use technology appropriately to access, manage, analyse, and disseminate information.

Understanding and Managing Change

Society has always changed and evolved, but change is now much more rapid, pervasive, and far-reaching in its consequences than ever before. We are experiencing significant transformations in all areas of life – social, economic, political, technological, and environmental.

In order to learn to deal effectively with the many changes occurring in the contemporary world, students first need to understand their causes and their impact on individuals, families, business and industry, and society as a whole. They need to become aware of the importance of flexibility and adaptability, as well as the need to acquire effective strategies for living with change. Such strategies include continued learning, planning for change, and constructive efforts to shape events through active participation in the life of the community.

General Learning Outcomes

Students will:
- understand the causes of changes in various areas of life and their impact on themselves, their families, their communities, and society;

- understand the ways in which change affects individuals and institutions in business, labour, and government;
- understand the relationship between human activity and environmental changes;
- understand the ways in which societies change in response to local and global events;
- recognize and be able to use effective strategies to manage change and embrace it with confidence.

Mathematics, Science, and Technology

Mathematics, science, and technology enable us to think about, understand, and influence the natural and the human-made worlds, and are natural partners in the pursuit of knowledge.

Work in the future will increasingly involve the learning and acquisition of new information, knowledge, and skills, and this will be particularly true for professions and jobs in which mathematics, science, and technology play an important part. One of the purposes of the new curriculum is to provide students with the foundations necessary for making informed decisions about future educational and career goals as well as wise decisions about their personal life. An awareness of the work/career opportunities in mathematics, science, and technology, areas in which women have not traditionally been encouraged to participate, will allow all students – regardless of gender – to examine and clarify their interests and to map out educational plans that will enable them to acquire and develop the knowledge, skills, and values they will require to pursue specific career goals. Students should also become familiar with the changes that new technologies have brought about in the workplace, both through their school programs and opportunities available in the community.

Mathematics is a language used in many disciplines. The program should help students to understand the connections among disciplines and to recognize and appreciate the role of mathematics in scientific, technological, and social inquiry. For example, the importance of statistics in social planning, of geometrical principles in map making, or of measurement in construction illustrates both how useful and how essential mathematical knowledge is in many areas of daily life and human endeavour. Through the application of mathematical principles and operations in problem-solving situations and other learning activities, students acquire knowledge and skills in areas in which they must have competence to function effectively in a technology-oriented society. These areas include: inquiry and problem solving; number sense and numeration; spatial sense and geometry; measurement, patterning, and algebra; and data management and probability. Computational skills include pencil/paper techniques, mental/estimation skills, the use of measuring instruments, calculators, and computers, and the selection of appropriate techniques for given situations. Essential communication skills include the ability to use mathematical language, models, and symbols correctly and appropriately, and to display, communicate, and interpret numerical and algebraic information in text, tables, graphs, and symbols.

Science is both a body of knowledge and theory about natural phenomena *and* a set of principles and/or methods for investigating and explaining the natural world. These theories and methods are many and varied and are open to continual re-evaluation and revision. Thus, while the program should stress the importance of science in our society, it should also make students aware that the explanations it offers are not necessarily complete or final.

Scientific inquiry has ethical and aesthetic dimensions, since it brings into play not only the intellect but also the senses and values of individuals as they seek to understand causes, effects, and relationships. A scientific perspective can instil a sense of wonder and respect for life and the environment.

The science curriculum covers several areas of scientific study, including life science, earth and space science, and physical science. It provides all students with information about the natural world that they can use in everyday life, and it prepares them to participate effectively in a society in which science and its applications play an important part. Students must be able to use scientific language, models, symbols, methods, and apparatus in investigating natural phenomena. They should also consider a number of ethical issues related to scientific exploration and the use of scientific findings in order to recognize that scientific knowledge is not morally neutral but has implications for the welfare of society.

The study of technology focuses on the design and function of physical products, human processes, and environmental systems that help us to adapt to the natural environment. Technological activity involves the application of mathematical and scientific knowledge and skills to everyday problems and situations. Young children learn about technology by exploring in play. Later, students learn how to conduct inquiries, design, produce, and evaluate products and systems, and use tools and processes to meet real and imaginary adaptational challenges.

In our increasingly technology-oriented society, technological competence is more and more important both in the workplace and in everyday life. All students need to understand a wide range of technologies in order to be able to make wise choices and use these technologies appropriately in a variety of contexts to enhance both their own life and work and those of others. The pace of technological change makes it important for students to develop the skills and flexibility needed to adapt confidently to new technologies. Moreover, the interdependence of society and the environment makes it essential for students to become conscious of and concerned about the impact of technology on both society and the environment.

The Mathematics, Science, and Technology program area comprises four broad topics: Understanding Models, Theories, and Perspectives; Understanding Systems, Structures, and Their Functions; Investigating Interrelationships and Change; and Inquiring, Reasoning, and Reporting.

Understanding Models, Theories, and Perspectives

It is important for students to know about and understand the significance of diverse theories, models, opinions, and attitudes related to mathematics, science, and technology, and to relate these diverse views to their social and cultural contexts. Learning experiences that help students to understand different perspectives will be useful to them in a world characterized by rapid change and diversity, in which people's views about social, environmental, and other issues often differ widely.

General Learning Outcomes

Students will:
- know how to investigate, build, explain, and evaluate models and theories representing the natural and human-made worlds;
- be able to use the languages, models, symbols, and methods of mathematics, science, and technology with accuracy and in appropriate contexts;
- know how to conduct an inquiry with intellectual honesty, objectivity, and discipline, as well as respect for others and the environment;
- know how to analyse and evaluate their own views and those of others;
- understand and appreciate the contributions of Canadians and others to mathematics, science, and technology.

Understanding Systems, Structures, and Their Functions

Learning about systems and structures enables students to understand the world as a whole by exploring its interconnected parts. Important topics include: products and the processes of their creation; patterns and aesthetics and their application; and adaptability, interdependency, and health. Important skills and activities include numeracy, discrimination, seriation, sorting, estimating, and designing, creating, and testing processes, systems, and products.

General Learning Outcomes

Students will:
- know how to use safely a variety of technologies, materials, and tools to conduct inquiries and to design, build, and report on processes, systems, and products;
- bring creative and critical thinking skills and a disciplined approach to the processes of inquiry, problem solving, and design;
- understand and be able to use a variety of concepts and skills associated with natural, human, numerical, and spatial systems and processes;
- be able to create, analyse, and evaluate physical products, human technological processes, and environmental systems;
- be able to identify and describe aesthetic qualities in systems, objects, products, and environments and incorporate such qualities into their own designs and creations.

Investigating Interrelationships and Change

Natural and human-made environments exist in dynamic relationship to one another. The links that exist between systems and structures mean that changes occurring in one area of life affect many other areas. Awareness of this interdependency helps students to see the relevance of mathematics, science, and technology to social, economic, political, and environmental issues and concerns. Students learn about interrelationships and change as they investigate causes and their effects through the application of inquiry skills. They learn to use the concepts of pattern, interconnection, balance, and variety to understand and describe the conditions and processes that shape natural and human-made environments.

General Learning Outcomes

Students will:

- understand the ways in which mathematics, science, and technology are interconnected;
- understand that mathematics, science, and technology do not exist in isolation but shape and are shaped by a variety of societies and cultures;
- know how to explain and evaluate relationships between humans and the environment;
- demonstrate concern for living things and ecosystems;
- be motivated to play their part in preserving and enhancing the environment;
- see the relationship between their own knowledge and abilities and possible career opportunities in the fields of mathematics, science, and technology and, where appropriate or necessary, question occupational stereotypes related to gender or background.

Inquiring, Reasoning, and Reporting

To engage in mathematical reasoning, scientific inquiry, and technological design and production, students need to develop effective reasoning and communication skills. Students develop these skills through individual and group activities that require them to gather, evaluate, and select information and report their findings.

General Learning Outcomes

Students will:

- be motivated to ask questions, seek answers, and communicate results;
- know about and be able to use a variety of methods to gather and analyse information, make inferences, draw conclusions, and make and communicate informed decisions;
- be able to use appropriate information technologies in the collection, storage, processing, and communication of data;
- be able to apply appropriate methods of inquiry and design to investigate, analyse, and resolve issues related to the natural and human-made environments;
- know about and be able to use a variety of problem-solving strategies;
- be able to implement decisions responsibly and evaluate the results critically.

PART IV

Learning Outcomes for Grades 3, 6, and 9

General outcomes for each core program area were identified in Part III. Part IV contains more specific learning outcomes to be achieved in each core program area by the end of Grades 3, 6, and 9.

In all four core program areas, the specific outcomes are preceded by the general outcomes to which they relate. (For ease of reference, the general outcomes are numbered and set in boldface type.)

The specific outcomes for the Arts, Self and Society, and Mathematics, Science, and Technology are organized under the various components of each area. As pointed out in Part III, the components of these program areas are interrelated; they are separated only for the purpose of defining outcomes.

The specific outcomes for Language are organized as follows:

a) The outcomes for first-language learning are listed under "Reading", "Writing", and "Listening and Speaking". It should be stressed that these are interrelated language skills, and this organization of the language outcomes is not meant to imply that they are to be developed separately. Rather, the intention is to demonstrate, as clearly as possible, how each of these skills contributes to overall language development.

b) The outcomes for second-language learning are listed under "Listening", "Reading", "Speaking", "Writing", "Cultural Understanding", and "Language-Learning Awareness". Specific outcomes are not provided for Grades 3, 6, and 9; instead, all the specific outcomes are listed for each of these skill areas under five stages, which represent a cumulative development in proficiency.

Although many of the specific outcomes are presented in a sequential manner for Grades 3, 6, and 9, some topics or activities are not appropriate for all three grades; in such instances, an outcome is given only for those grade levels for which it is appropriate. Also, the specific outcomes in Self and Society are not presented sequentially for Grades 3, 6, and 9 because a developmental progression from one level to the next is not always appropriate.

Outcomes for Language

The principles of first- and second-language learning outlined here summarize important information about how language learning occurs and provide a context for understanding the detailed language-learning outcomes described in this document. The principles highlight for teachers the fact that children's language development and competence begin before they enter school, continue throughout life, and are influenced by the societal context. In a diverse society, true language proficiency consists not only in competence in language use but also in possession of the language awareness that leads to social and intercultural understanding. The school has a responsibility to ensure that students develop language proficiency in this broad sense. Both the learning outcomes for first-language learning and the stages of proficiency described for second-language learning emphasize the development of language that students can use to think, learn, and communicate in a linguistically and culturally diverse society. Although students may vary in the complexity or sophistication of their language use, the same kinds and quality of language-learning experiences should be available to all students.

Principles of First- and Second-Language Learning

1. All aspects of language use – listening, speaking, reading, and writing – are important. These components are interconnected, and the student's growth in one area influences and is affected by development in all of the others.
2. Talking and writing are no less important as instruments of learning than listening and reading.
3. Talking to or writing for a real audience, whether peers, younger children, the teacher as a partner, or a more general public, helps learners to develop language proficiency.
4. Students are most likely to develop language competence and awareness, thinking skills, and social skills when they have opportunities to use language purposefully and in all its functions.
5. A certain minimum fluency is required before students are able to reflect critically on their own language use. Attention to language forms and conventions should therefore increase gradually as language skill develops and should arise specifically out of the reading and writing being done. Students are more likely to achieve good punctuation and spelling and surface correctness through extensive practice in reading and writing than through conscious attempts to apply rules out of context.
6. The stages through which students pass in developing listening, speaking, reading, and writing ability are the same for all, but rates of progress and learning styles may vary from student to student.
7. Language, culture, and identity are inextricably linked. A language program that recognizes, respects, values, and supports the student's gender and racial, cultural, and linguistic background enhances the student's self-concept and facilitates learning.
8. Many learners come to school literate in a first language that is different from the language of the curriculum. Students' first-language literacy enhances many aspects of second-language development that are related to overall conceptual ability and academic achievement.
9. The school's ability and willingness to recognize the cultural and linguistic experiences that students bring to school and that give meaning to their lives encourage all students to develop positive attitudes towards minority languages and their communities.
10. Knowledge of a second language helps students to develop linguistic and cultural awareness, deepening and enhancing their understanding and appreciation of the role of language and culture in society.

11. Different social values and status are assigned to the different languages that coexist in a society. Students' sense of identity and, consequently, their ability to learn are affected by social attitudes towards their language and culture. In order to value both their own culture and that of others, students from both majority and minority groups need opportunities to think critically about issues of bias and stereotyping related to language and culture.

First-Language Outcomes

The learning outcomes for English and Français as languages of instruction in Ontario schools emphasize the learners' active use of multiple forms of language and discourse in order to develop their competence in using language to think, learn, and communicate across the school curriculum and in the world outside the school. The outcomes also describe the personal, social, and cultural development expected of language learners at key points in the Formative Years and the Transition Years: Grades 3, 6, and 9.

The developmental nature of language learning is reflected in the fact that some outcomes are repeated, with slight variations, at the different grade levels. For example, an important language outcome for each of Grades 3, 6, and 9 is for students to be able to select from a range of reading materials those that are appropriate for a variety of different purposes. Student growth is demonstrated primarily by an increase, from level to level, in the complexity of reading materials and in students' skill in selecting what is appropriate for their purposes.

The inclusion of reading, writing, and listening and speaking components in each general language outcome reflects the integrated nature of language learning. Language proficiency involves a broad cluster of dynamically interrelated abilities rather than a series of discrete skills. Although discrete skills and strategies have been identified for reading, writing, and listening and speaking, it is important for assessment to focus on students' overall ability to manipulate and integrate these discrete skills and strategies. For example, in assessing students' writing proficiency, their ability to use the conventions of language, to speak correctly, and to revise and edit must be judged in the context of their ability to produce effective writing for different purposes and audiences.

Outcomes for First-Language Learning

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
1. be able to use language for a variety of purposes and in a variety of contexts		
Reading		
be able to select material appropriate to their own purposes for reading	be able to select independently a wide range of material appropriate to their own purposes for reading	be able to select independently a wide range of material appropriate to a wide range of purposes for reading
use the major reading strategies of prediction, confirmation, and self-correction to read for meaning in all contexts	use the major reading strategies of prediction, confirmation, self-monitoring, and self-correction to read for meaning in all contexts	use the major reading strategies of prediction, confirmation, self-monitoring, and self-correction to read for meaning in all contexts
understand and appreciate the multiple purposes and uses of reading *(e.g., for pleasure and entertainment; for information; as a means of recognizing and observing cultural differences and similarities; as a means of sharing experiences with others)*	understand and appreciate the multiple purposes and uses of reading *(e.g., for pleasure and entertainment; for information; for insight into themselves, others, and the world; as a means of recognizing themselves in the world described in literature and developing pride in their own identity)*	understand and appreciate the multiple purposes and uses of reading *(e.g., for pleasure and entertainment; for information; for insight into themselves, others, and the world; as a means of sharing experiences with a wide variety of other people)*
use reading to acquire information and to enrich personal vocabulary	use reading to acquire information and ideas and to enrich personal vocabulary	use reading to acquire information and ideas, clarify and extend ideas previously acquired, and enrich personal vocabulary
	be able to read silently to derive meaning from a text when they are reading for themselves	be able to read silently to derive meaning from a text when they are reading for themselves
	be able to reflect on and share their interpretations of a text through discussion	be able to reflect on and share their interpretations of a text through discussion
		be able to interpret text at different levels of meaning and from different points of view
		be able to adjust reading rate and style (skimming, scanning, careful reading) according to the purpose for reading

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
Writing		
understand some of the different purposes for writing (to inform; to entertain; to record information, ideas, and feelings for self or others; etc.), and understand and use appropriate organizational forms for different purposes *(e.g., letter, menu, story, poem, list)*	understand many of the different purposes for writing (to inform; to entertain; to record information, ideas, and feelings for self or others; etc.), and understand and use an increasing variety of organizational forms for the different purposes	understand the different purposes, audiences, and contexts for writing, and identify and use appropriately different types of vocabulary, tones, levels of language, stylistic devices, types of sentence structure, and images
understand the need for clarity in writing in order to communicate with their audience (either self or others), share their writing with others, and revise to clarify their meaning in keeping with their purpose and audience	understand the nature and requirements of their audience, and adapt, revise, and edit the content and organization of their writing accordingly *(e.g., by using vocabulary appropriate to peers, younger children, or adults; by using conventional spelling and punctuation to facilitate reading for an audience)*	understand and use a wide variety of forms and genres *(e.g., narration, description, exposition, poetry)*
use and appreciate writing as a means of self-expression and self-discovery and as a means of sharing information, ideas, and feelings with others, including people of other cultures	appreciate and use writing as a means of self-expression and self-understanding (i.e., as a means of recording and reflecting on experience and one's responses to it), as a way of learning, and as a vehicle for meaningful communication with others, including people of other cultures	appreciate and use writing as a means of intellectual and emotional expression (i.e., as a means of recording and reflecting on experience and one's responses to it), as a way of learning, as a vehicle for meaningful communication with others, and as a means of developing and expressing one's opinions and values *(e.g., by taking and expressing a position on an issue)*
		understand the terminology associated with different forms of writing and with the writing process itself, and use the writing process to extend and refine their writing abilities in a variety of contexts and for a variety of purposes
		use electronic media to share ideas, experiences, and feelings with others, including people of other cultures, and examine issues from different perspectives

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
Listening and Speaking		
understand and appreciate a number of the purposes and uses of listening and speaking in various contexts *(e.g., to share experiences, ideas, and plans with others; to provide information or obtain it; to enjoy a piece of writing read aloud by someone else)*	use and appreciate listening and speaking as means of receiving and giving information, sharing experiences with others, and broadening their perspectives	use and appreciate listening and speaking as means for self-expression, thinking, and learning *(e.g., listening to or giving a talk; clarifying one's ideas through discussion with others; obtaining, analysing, and interpreting information)*, and for communicating information, experiences, and ideas to others
listen and speak in order to give and receive information at home, at school, and in the community	listen to and interpret information to identify a variety of different purposes, listener needs, and contexts *(e.g., chatting, role playing, making a speech, asking questions, giving a report)*, and adapt the content and style of their speech accordingly	ask relevant questions to obtain, analyse, and interpret information in a variety of contexts
listen and speak in order to share experiences and ideas and interact effectively with others in a variety of contexts	listen and speak in order to interact effectively with others in a variety of contexts and interpret with sensitivity verbal and non-verbal expression by speakers of different cultures and languages	listen and speak in order to interact effectively with others in a variety of contexts and interpret with sensitivity verbal and non-verbal expression by speakers of different cultures and languages
accept the risks involved in oral communication, and use a personal voice to express themselves with assurance and pride	accept the risks involved in oral communication, and use a personal voice to express themselves with assurance and pride	accept the risks involved in oral communication, and use a personal voice to express themselves with assurance and pride
		understand and use appropriately some of the more formal functions and forms of oral communication *(e.g., present oral reports to others on researched topics in various curriculum content areas)*
2. be able to use language to think and learn in a variety of curriculum areas		
Reading		
be able to select material appropriate to their learning needs from a range of sources	be able to select independently material appropriate to their learning needs from a variety of sources	be able to select independently material appropriate to their learning needs from a wide variety of sources

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
understand the function of such organizational features as table of contents, index, and glossary, and use them to locate information	understand and use a range of research skills to collect and interpret information independently and with peers *(e.g., formulate questions; locate information; translate information into their own language; compare information from a variety of texts and other media; clarify information through discussion with others)*	understand and use a range of research skills to collect and interpret information independently and with peers *(e.g., formulate questions; locate information; translate information into their own language; compare information from a variety of texts and other media; use thinking skills appropriate to the task and content area to analyse and interpret information)*
be able to identify the organizational structures and features of a text that can assist them in understanding information, and use such features to locate and restate the main idea and cite some supporting details from the text	show understanding of a topic by presenting and/or explaining material in a variety of ways *(e.g., demonstrating a process, creating models, summarizing information)*	
be able to interpret pictures, photographs, simple diagrams, charts, and maps		
be able to follow a sequence of directions in a text		
understand and appreciate that the ability to locate and retrieve information supports and enhances their learning in many content areas	appreciate the importance of acquiring the special vocabulary in a particular area of study, and use specialized vocabularies appropriately in oral and written work	appreciate the importance of acquiring the special vocabulary in a particular area of study, and use such specialized vocabularies appropriately in oral and written work
	understand and appreciate the ways in which co-operative learning strategies can help them extend their learning	understand and appreciate the ways in which co-operative learning strategies can help them extend their learning
	understand and appreciate the importance of having access to a variety of sources of information *(e.g., texts, computer databases)*	understand and appreciate the importance of having access to and consulting a variety of sources *(e.g., texts, computer databases, and other materials)* to obtain information about a particular content area

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
Writing		
understand that writing has an important role to play in learning, and use writing in a number of ways to facilitate their learning in the different content areas *(e.g., to inform, give directions, and describe processes; to formulate questions to guide their inquiries; to record and preserve relevant information; to develop the specialized vocabulary used in different content areas; to record their own learning process in a content area [e.g., by keeping a learning log])*	understand and appreciate the role of writing in the learning process, and use writing accurately and appropriately in a number of ways to facilitate learning in the different content areas *(e.g., to inform, give directions, and describe processes; to formulate questions to guide their inquiries; to record information accurately and preserve relevant information on a topic for a variety of audiences; to develop the specialized vocabulary used in different content areas; to record and reflect on their own learning process in a content area [by keeping a learning log])*	understand and appreciate writing as a way of learning and organizing information and of developing proficiency in the use of vocabulary of different content areas
understand the role of graphics in presenting information, and use illustrations, simple labelled diagrams, and other visual materials to support and extend their written work	understand the role of graphics in communicating information and use visual materials to support and extend their written presentations	understand the role of graphics in communicating information and use visual materials to support and extend their written presentations
	understand that different forms of writing may be appropriate for recording information in the various content areas and select from models of writing those that are appropriate to specific areas of study	understand that a variety of forms of writing *(e.g., exposition, description)* are required in all areas of study, and use different forms of writing appropriately to organize their ideas
	be able to select and use appropriately such structures as lists, simple summaries, and definitions to present information	be able to select and use appropriately such structures as lists, summaries, and definitions to present and preserve information
	understand and appreciate the particular usefulness of expository writing for recording and presenting information in some content areas	understand and appreciate the particular usefulness of some forms of writing and graphic representation for presenting information in some content areas
		use writing to record and reflect on their own learning process in a content area

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
Listening and Speaking		
understand and appreciate listening and speaking as means of acquiring new concepts and experiences in the various content areas and as means of indicating their personal preferences and interests within content areas	understand and appreciate the role of listening and speaking in helping them to connect their learning in one content area with that in another and to prepare and present oral reports in the different content areas	understand and appreciate the role of listening and speaking in the process of developing generalizations and applying concepts across content areas
listen and speak in order to discover, discuss, and clarify new concepts and experiences, express preferences, and indicate interests in the various content areas	listen and speak in order to discuss concepts in one content area and relate them to another content area	be able to articulate generalizations and apply concepts and new vocabulary across content areas
	listen and speak in order to plan, organize, and present oral reports and projects in different content areas	
		understand and appreciate the role of listening and speaking in the process of studying and analysing various forms of language
		be able to discuss various aspects of language and literature *(e.g., figurative language, literary forms, stylistic devices, the role of the audience, the nature and influence of classical languages)*

3. be able to use language to make sense of their own experiences and to share experiences with others

Reading

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
understand and appreciate that children's literature can make a significant contribution to their understanding of themselves and their roles within the family and community	understand and appreciate that children's literature can make a significant contribution to their understanding of themselves and their roles within the family and community	understand and appreciate that literature contributes to personal growth in helping them to clarify their values, learn about other cultures, and broaden their knowledge of the world
understand and appreciate that children's literature can extend and enrich their knowledge and understanding of Canadian society and countries and cultures other than their own	understand and appreciate that children's literature and various kinds of expository text can extend and enrich their knowledge and understanding of the history, customs, and cultures of different cultural groups, both in Canadian society and in other countries	
	be able to compare information about various cultural groups in order to understand and appreciate differences and similarities among people	be able to compare information about various cultural groups in order to understand and appreciate differences and similarities among people
relate characters and situations from children's literature to their personal experience and, as a consequence, deepen their understanding of and sensitivity to others and the situations in which they find themselves	experience empathy with characters in children's literature and, as a consequence, deepen their understanding of and sensitivity to others and the situations in which they find themselves	experience empathy with characters in literature and, as a consequence, deepen their understanding of and sensitivity to others and the situations in which they find themselves
recognize the values expressed in children's literature by relating characters and situations to their own experience	understand and assess the values expressed in children's literature by relating characters and situations to their own experience	assess the values expressed in literature by relating characters and situations to their own experience
express their response to their personal reading in a variety of ways *(e.g., through discussion, role playing)*	reflect on their personal response to children's literature and share their response with others	reflect on their personal response to literature and share their response with others
	be able to identify prejudice, bias, and stereotyping in literature and other texts and recognize their negative impact on individuals	detect prejudice, bias, and stereotyping in texts of all kinds, recognize and understand their negative effects for individuals, and strive to counteract these effects in their attitudes and behaviour

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
		value literature that employs inclusive, bias-free language
Writing		
understand and appreciate the use of personal writing *(e.g., journals, diaries, responses to reading)* for recording their thoughts, feelings, and interests; developing their sense of identity and voice; and examining their relationships with others	understand and appreciate the use of personal writing *(e.g., journals, diaries, responses to reading)* for recording their thoughts, feelings, and interests, developing their sense of identity and a distinctive voice, and understanding their relationships with others	understand and appreciate that personal writing *(e.g., journals, diaries, and responses to literature)* can reveal personal identity and help shape the sense of self as both a unique individual and a social being
write to record their own thoughts, feelings, and interests and to describe and examine their relationships with others	write *(e.g., in personal journals)* to record their own thoughts, feelings, and interests; to reflect on their own identity; and to describe and explore their relationships with others	write to record their own and others' thoughts, feelings, and interests and to develop and strengthen their sense of personal and social identity
write to share their thoughts, feelings, and interests with others	understand and appreciate the role of writing in developing a sense of community by allowing individuals to communicate their ideas and learn about the ideas of others	understand and appreciate the role of written expression in developing a sense of community by allowing individuals to communicate their ideas and feelings and learn about the ideas and feelings of others
write to understand and evaluate their own behaviour and ways of interacting with others	write to understand and evaluate their own and others' behaviour and ways of interacting	write to understand and evaluate their own and others' behaviour and ways of interacting
	use writing to examine aspects of their own culture and that of others	use writing to reflect on their relationship to their own culture
Listening and Speaking		
understand, appreciate, and use listening and speaking as means of communicating their own preferences and identity and learning about those of others	understand and appreciate listening and speaking as means of learning about their own and other cultures from a variety of sources	understand, appreciate, and use oral communication as means of discovering and discussing both the uniqueness and the commonalities in experiences of people of both genders and from all types of background *(e.g., racial, cultural, linguistic, socio-economic)*

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
use oral communication to share their experiences, responses, and perspectives with others	use oral communication to discover and discuss the similarities and differences among their own and other cultures	understand, appreciate, and use oral communication as a means of gaining insight into their own values and those of others
develop, value, and use vocabulary that enables them to communicate a sense of self-worth and show respect for people of both genders and from all types of background	develop, value, and use listening and speaking strategies and vocabulary that help them to communicate a sense of self-worth and to show respect for people of both genders and from all types of background	develop and use oral communication strategies and vocabulary that will promote mutual respect in discussions of their own and others' values and experiences
4. be able to use the conventions of language appropriately for the purpose, audience, and context		
Reading		
recognize and use a variety of language conventions to construct and clarify meaning in text *(e.g., basic punctuation such as full stops, question marks, quotation marks; a range of structures and patterns used in oral and written language)* understand and appreciate the function of punctuation and of language structures and patterns in enabling them to construct and clarify meaning in text	recognize and use an increasing range of language conventions *(e.g., more complex language and sentence structures and related punctuation)* to construct and clarify meaning in text	understand that the conventions of language are embodied in many different types of texts and that the language conventions and patterns used vary depending on the purpose and type of text and the different levels and functions of language incorporated in it
see and use texts as resources for learning the appropriate use of language conventions *(e.g., for learning spelling, punctuation, sentence structure)* and appreciate reading as a means for learning the conventions of language	see and use texts as resources for learning the appropriate use of language conventions *(e.g., for learning spelling, punctuation, sentence structure)* and appreciate reading as a means for learning the conventions of language	appreciate reading as a means for learning a wide variety of language conventions and patterns use texts as sources for learning about language
use reading to develop spelling ability (at this stage, develop awareness of the visual patterns in words)	use reading to develop their spelling ability *(e.g., to increase their knowledge of roots, letter clusters, variant endings, and affixes)*	use reading to develop their spelling ability *(e.g., to increase their knowledge of roots, letter clusters, variant endings, and affixes)*

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
use reading to develop vocabulary and enrich and enhance their use of language	read to develop vocabulary and enrich and enhance their use of language	read to develop vocabulary, enrich and enhance their use of language, and develop awareness of the rich possibilities of language as a medium for expression
		compare the language conventions and patterns found in texts with those they use in their own language
Writing		
understand and appreciate the conventions of language *(e.g., standard punctuation, spelling, and structures and patterns of language)* as means for clarifying meaning and communicating effectively in writing	understand and appreciate the conventions of language *(e.g., standard punctuation, spelling, and structures and patterns of language)* as means for clarifying meaning and communicating effectively in writing	understand and appreciate the conventions of language *(e.g., grammatical forms and patterns, spelling, and punctuation)* as means of clarifying meaning and writing effectively for a variety of audiences and in a variety of contexts
understand that conventional spelling is required in most published written work		
use basic conventional punctuation and capitalization and conventional spelling of frequently used words in their writing	extend the range of words that they can spell correctly and experiment with an increasing range of punctuation conventions	understand and use the proper spelling of common words and the proper grammatical and punctuation conventions for English-language sentences
use conventional structures and patterns from oral and written language in their writing	experiment with an increasing range of conventional structures and patterns derived from their reading	use their knowledge of the conventions of standard written English to write brief passages with clear meaning and accurate spelling and punctuation
identify approximate spellings in their writing and begin to use resources such as primary dictionaries to make corrections in their writing	use an increasing range of spelling strategies to spell unfamiliar words and a wider variety of resources to verify their attempts	employ a range of spelling strategies to spell unfamiliar and/or difficult words, and use a range of resources to verify spellings of which they are uncertain
Listening and Speaking		
understand and appreciate the role of standard language forms in effective oral communication	understand that oral language must be coherent and specific to communicate meaning effectively to others, and value coherence and specificity in oral communication	value meaningful and effective oral communication and understand the importance of adapting oral language to the needs of listeners, and to the context, in order to communicate effectively

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
use a variety of sentence and question forms to make themselves understood and to understand the speech of others	understand that complex and varied sentence and question forms may be needed to express more complex concepts and abstract ideas	adapt vocabulary, sentence structure, rate of speech, and level of language to the needs of listeners, and shift between colloquial and more formal speech as necessary and/or appropriate
	use a variety of complex sentence and question forms to discuss more complex concepts and abstract ideas	understand that speakers, along with listeners, have a responsibility for ensuring that they are being understood and must revise their language accordingly
recognize and use standard grammar and sentence structure in formal conversation	express concepts orally in coherent sentences, using specific vocabulary to enhance meaning	monitor and revise their own oral expression *(e.g., vocabulary, sentence structure, pronunciation, grammar)* in order to make themselves clearly understood by their audience

5. be able to use language to develop collaborative and independent thinking and learning strategies

Reading

understand that their knowledge of the world and of language can be applied in reading, and use prior knowledge to interpret texts		
use knowledge of the topic, language structures, and sound-symbol relationships to make predictions and practise self-correction when reading	understand and use word structures to interpret unknown words *(e.g., by reference to suffixes, prefixes, and the meaning of root words)*	apply known information and strategies to read and comprehend increasingly complex material
use meaning as the main criterion for monitoring and determining the accuracy and effectiveness of their reading		
understand that rereading deepens and extends their insight into the meaning of a text, and reread to clarify initial impressions and locate and state main ideas and supporting details		

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
understand that texts contain explicit and implicit information, and recognize and use structures that facilitate meaningful reading to interpret text in genres such as narration, exposition, and poetry	understand and use a variety of strategies to interpret text on various levels *(e.g., make inferences, compare information from a number of sources, describe settings, locate and interpret information about the author's purpose)*	understand that text can be interpreted on a number of levels, and use a variety of strategies to interpret different levels of meaning in texts of increasing complexity
understand and appreciate that reading facilitates thinking and learning, both independently and in collaboration with others, and use information from texts to further their own learning	understand and appreciate that reading facilitates thinking and learning, both independently and in collaboration with others, and use information from texts to further and enhance their own learning	understand that texts reflect the point of view, biases, and strengths and limitations of the author, and understand and appreciate the importance of reading independently and critically to further their own learning and to develop strategies for analysing text read critically in order to develop their own opinions about the content and style of texts *(e.g., recognize bias and stereotypes; question and reflect on issues encountered in text; analyse information presented in text and other media in order to make critical judgements about it; consult a variety of sources to verify information)*
	understand research processes and a variety of reading and thinking strategies, and use them to formulate research topics and questions and to find relevant information in reading materials and computer databases	
		recognize the distinguishing features of different genres, and form generalizations about a variety of genres
Writing		
understand and appreciate that what they know about the world and about language can be used to write, and draw upon their personal experiences and interests in writing	draw upon ideas, themes, and structures from books and other media in their writing	

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
recognize the structural elements in different forms of writing *(e.g., the beginning, middle, and end of story/narration; the main topic and supporting details of exposition)*, and use them to shape their own writing	identify and use a variety of models in their writing	understand that the structures used in writing clarify, shape, and direct their thinking processes select and use various structures in writing to clarify, shape, and direct their thinking
understand the role of prewriting activities and rereading in the writing process, and discuss their ideas with peers and adults before and during the writing process understand and appreciate the importance of revising to clarify meaning for an audience	understand and use the components of the writing process *(e.g., formulate research topics and questions; record relevant information; compare and synthesize information from a variety of sources; discuss their writing with peers and adults in order to reflect on, analyse, and revise their writing; use graphics such as illustrations, charts, maps, and graphs to support and enhance meaning)*	understand and use the components of the writing process, recognize different forms of writing, and use these forms to develop various thinking skills *(e.g., the skills of analysis, synthesis, clarification, application)*
understand and appreciate that writing is a way of preserving ideas, and value their writing (drafts and published pieces) accordingly	understand and appreciate writing as a way of developing independent and co-operative thinking and learning strategies	appreciate and use the writing process as a way of developing independent and co-operative thinking and learning strategies
Listening and Speaking		
understand and use the strategy of asking questions and discussing the answers as a way of obtaining and clarifying information on a variety of topics	understand, value, and use oral communication as a vehicle for examining and clarifying the feelings and motives of people *(e.g., characters in stories)* in order to explain their actions	understand and value the role of oral communication in thinking and learning, and use it to organize, analyse, interpret, summarize, and recall information
understand, appreciate, and use oral communication as a means for clarifying and explaining their preferences, feelings, ideas, and plans	understand, value, and use oral communication as a way of clarifying new concepts and problems and of proposing and considering alternative solutions	understand and value the role of oral communication in problem solving, and use it to elicit a variety of perspectives and responses and to propose and discuss alternative solutions

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
6. be able to use language to create practical and imaginative works in a variety of media, both as individuals and as members of a group		
Reading		
understand that various kinds of texts from a wide range of media can be used both as models and as sources of information in creating individual and group works	understand that various kinds of texts from a wide range of media can be used both as models and as sources of information in creating individual and group works	understand that various kinds of texts from a wide range of media can be used both as models and as sources of information in creating individual and collaborative works in a variety of media
use information from texts to create drawings, models, dramatic presentations, and written materials	use information from texts to create drawings, models, dramatic presentations, and written materials	use reading materials as models and sources of information in order to create their own works, independently and as members of a group
use a variety of models and instructions to create works to demonstrate their learning *(e.g., labelled diagrams, illustrated stories, models)*	use a variety of models and instructions to create works to demonstrate their learning *(e.g., labelled diagrams, illustrated stories, models)*	compare models in order to select those appropriate to a particular task
understand and appreciate works created by others and their own works as means of sharing information	understand and appreciate the works of others and their own works as means of sharing information and demonstrating learning	understand and appreciate the works of others and their own works as means of sharing information and demonstrating learning
	recognize and appreciate how a variety of media can be used together to heighten the impact of a presentation, and employ this strategy in their own presentations	recognize and appreciate how a variety of media can be used together to increase the effectiveness of a presentation, and employ this strategy in their own presentations
Writing		
understand some basic facts about the nature of written works *(e.g., that words can be used in logical order to make sentences that others can read and understand; that their written work must be legible so that others can read it; that written works serve a variety of purposes and appear in a variety of forms)*		

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
be able to see and value writing as a way of creating meaning, and be motivated to write independently and with assistance from peers and adults understand and appreciate writing as a way of creating works that can be shared with others	be able to see and value writing as a way of creating meaning, and be motivated to write, independently and in collaboration with others	understand the components of the writing process, and use the process to create written works, independently or in collaboration with others
begin to use "publishing strategies" such as self-correction and legible writing	use writing in combination with other media to increase the impact of their presentations, selecting the appropriate forms and media for the purpose	
use resources such as primary dictionaries and thesauri	integrate information from a variety of sources in their written work	integrate information from a variety of sources in their written work
understand the need to revise and edit to clarify meaning; test the effectiveness of their written works by reading them aloud to themselves and others; and identify areas that need clarification	understand that written works serve a variety of purposes and appear in a variety of forms	understand that written works serve a variety of purposes and appear in a variety of forms that require the use of specific, recognizable conventions
	understand that particular forms require the use of specific features, structures, and patterns *(e.g., narratives require an introduction, story problem, and resolution)*	
	adapt their writing to suit the particular purpose *(e.g., present written information in sequence in order to explain a process)*	select the appropriate form for a particular purpose, and adapt their writing to suit the form and the purpose
appreciate written works created by themselves and others	appreciate written works created by themselves and others	appreciate written works created by themselves and others
	appreciate and use responses to their works as means for enhancing, extending, and evaluating their learning	appreciate and use responses to their works as means for enhancing, extending, and evaluating their learning
		understand that the works of other writers can serve as models for writing, and use them to develop their own writing skills

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
Listening and Speaking		
understand that oral communication in groups needs to be orderly and regulated by rules *(e.g., turn-taking, staying on topic)*		
appreciate oral communication as a means of facilitating group work *(e.g., to determine rules to be followed in group work, roles and responsibilities of group members, etc.)*	understand some of the purposes and uses of oral communication in creating a group or individual work *(e.g., to share and develop ideas for a story; to facilitate collaboration at all stages of the creative process)*	understand and appreciate the role of oral communication in group work *(e.g., to facilitate and manage group interaction; to ensure that personal preferences and viewpoints are heard)*
	appreciate the role of oral communication in story writing and other creative activities	
	use oral communication to select a topic of interest to a large number of students, and plan and create a group or individual work on the topic *(e.g., a play, a mural)*	use higher-level communication strategies *(e.g., indirect requests, bargaining, persuading, seeking alternative views)* to elicit ideas and opinions and to respond to them
		reflect on group dynamics in order to assess the comparative effectiveness of individual work and group work as creative methods

Second-Language Outcomes: Stages of Proficiency

Basic Considerations

Ontario schools offer a wide range of second-language programs for their students. While these programs differ in their goals, the number of hours of instruction, and the environment in which they occur, they share a common approach to second-language learning. In all second-language programs, students need to learn vocabulary and structures, to develop the skills of listening, speaking, reading, and writing, to acquire knowledge of language-learning strategies, and to develop esteem for the customs and beliefs of other cultures.

To allow for the great variety of second-language programs in Ontario schools, the second-language outcomes are not presented according to grades, but rather by stages of proficiency.

The stages of proficiency describe in broad terms the expected performance outcomes in second-language programs. The overall proficiency targets are presented in five stages under each of the following skill areas: Listening, Reading, Speaking, Writing, Cultural Understanding, and Language-Learning Awareness. These stages of proficiency allow educators to determine what a student can and sometimes cannot do regardless of where, when, or how he or she learned or acquired the language. The first stage of proficiency describes the novice second-language learner who uses the language in a limited range of concrete contexts and who can interpret and produce simple oral and written texts. The last stage, Stage Five, describes the advanced second-language learner who uses the language in a broad range of contexts, who can interpret and produce with facility complex oral and written texts, and who can communicate abstract concepts. These stages of proficiency are intended to be used for global assessment of integrated performance in speaking, listening, reading, and writing.

Variables that need to be considered in applying the stages of proficiency to specific second-language programs include the following:

- the broad goals of the program;
- the time allocation, both accumulated and within a given grade level;
- the age of the students at the entry point;
- the students' level of social and cognitive development;
- the previous education of the students, in particular, their language-development and literacy levels in their first language;
- the students' previous exposure to a second language;
- the degree to which students are able to use the language being studied outside the school;
- the status of the language being studied in the community; namely, whether it is spoken by the majority or only by a minority of people in the community;
- the extent of support offered by the school and community;
- the types of learning materials provided.

The second-language stages of proficiency take into account not only the range of variables described above, but also the demands of the curriculum at the various levels of schooling. Since they are described on a continuum, the stages of proficiency will serve as a guide to educators in measuring students' progress towards desired outcomes.

English As a Second Language and Actualisation Linguistique en Français

Programs in English as a second language (ESL) and Actualisation linguistique en français (ALF) are designed to assist students who come to school with little or no knowledge of the language of instruction by enabling them to acquire full fluency and proficiency in English or Français for both social and academic purposes. It is important, however, that the linguistic and cultural traditions these students bring with them to school be valued and respected in these programs.

Educators using the stages of proficiency for programs in English as a second language and Actualisation linguistique en français must keep in mind the ultimate goal of these programs – to enable students to participate as quickly and as fully as possible in the common curriculum and to achieve its expectations in all areas, including those stated for first language, either English or Français, according to the language of instruction used in the school.

Individual students in programs in English as a second language or Actualisation linguistique en français will proceed through the stages of proficiency at very different rates. While some may come to school having already developed a certain proficiency in English or Français, others may enter with no previous background. Research indicates that students who enter these programs with no previous background normally require from five to seven years of full-time schooling in the language to become fully proficient.

French As a Second Language and Anglais/English

French-as-a-second-language (core, extended, and immersion) and Anglais/English programs enable students in both English- and French-language schools to learn the other national official language. At the same time, these programs promote cultural understanding, support first-language development, and help students develop skills that they can use in their future learning of languages.

Students enrolled in French-as-a-second-language programs can be expected to reach the following stages of proficiency by the end of the Transition Years:

- Students in core French programs can be expected to reach Stage One of the second-language outcomes after 360 hours of instruction and Stage Two after 720 hours or no later than by the end of Grade 9.

- Students in extended French programs can be expected to achieve the second-language outcomes described in Stage Three after 1500 hours of instruction by the end of Grade 9.

- Students in immersion French programs can be expected to achieve the second-language outcomes described in Stage Four after 4160 hours of instruction by the end of Grade 9.

Students enrolled in Anglais/English programs can be expected to reach the following stages of proficiency by the end of the Transition Years:

- Students who have little exposure to English in their daily lives and who are enrolling in an Anglais/English program for the first time can be expected to achieve the second-language outcomes described in Stage One or Stage Two by the end of Grade 9.

- Students who have been exposed to varying amounts of English in their daily lives and who have been enrolled in an Anglais/English program at one of the various entry points can be expected to achieve the second-language outcomes described in Stage Three or Stage Four by the end of Grade 9.

- Students who have been exposed to English extensively in their daily lives and who have been enrolled in an Anglais/English program starting in Grade 5 can be expected to achieve the second-language outcomes described in Stage Five by the end of Grade 9.

Native As a Second Language

Native-as-a-second-language (NSL) programs enable both Native and non-Native students to learn Native languages and develop understanding and appreciation of Native culture. Such programs can help Native students develop a positive sense of identity as members of a distinct cultural group.

The status and function of Native languages vary greatly among Native communities. The decision to implement a Native-as-a-second-language program will, therefore, depend to a large extent on the wishes of the local Native community. In designing Native-as-a-second-language programs, educators must take into consideration the objectives for the degree of proficiency to be achieved by students in the Native language and the amount of time that can be spent on Native-language instruction.

Although the stages of proficiency will assist educators in assessing students' achievement in Native languages, the lack of socio-linguistic data on Native-language use and the variety of entry points into Native-as-a-second-language programs make it impossible to indicate with any degree of certainty the stage of proficiency in a Native language that can be expected of students by the end of Grade 9.

A Native student who arrives at school speaking only a Native language should not be moved too quickly into a second-language program in one of the official national languages, English or French. It is far more important to the student's long-range development to begin schooling in his or her own language. This will not only strengthen the student's self-perception through a sense of continuity between home and school, but will also allow the school to fully capitalize upon the student's prior experience as a language learner. It is important to remember that the Native student's ability to learn English or French as a second language may be directly related to proficiency in his or her ancestral language.

Heritage Languages

Heritage languages are offered through Continuing Education. The choice of languages, the duration of programs, and the number of hours of instruction are decided by the local school board.

The stages of proficiency can be used not only to help design Heritage Language programs, but also to diagnose the needs of students who enter these programs with varying backgrounds.

In many school boards elementary students enrolled in Heritage Language programs continue their language studies at the secondary level through programs in international languages. The use of the stages of proficiency to assess students' progress in Heritage Language programs can, therefore, assist teachers of international languages in designing their programs.

Outcomes for Second-Language Learning

Students will:

1. be able to use language for a variety of purposes and in a variety of contexts
2. be able to use language to think and learn in a variety of curriculum areas
3. be able to use language to make sense of their own experiences and to share experiences with others
4. be able to use the conventions of language appropriately for the purpose, audience, and context
5. be able to use language to develop collaborative and independent thinking and learning strategies
6. be able to create practical and imaginative works in a variety of media, both as individuals and as members of a group

Listening

Stage One

By the end of Stage One students will:

- understand, without repetition or rephrasing by the speaker, familiar[1] words and phrases, very short and simple statements, instructions, and questions which are expressed clearly in standard language at a natural rate of speed in face-to-face communication or on tape
- be able to make distinctions among the sound patterns that are essential for comprehension, namely, phonemes, intonation, stress and/or tone
- understand, after repetition by or with assistance from the speaker, key ideas in simple conversations on topics of personal relevance
- understand, after repetition and with some visual or concrete aids, the key information or ideas in short and simple stories, poems, songs, news items, or advertisements which are either read by the teacher or recorded and which contain a limited amount of unfamiliar vocabulary
- be able to demonstrate satisfaction and enjoyment from their listening experiences

Stage Two

In addition to demonstrating competence in the listening skills acquired during Stage One, by the end of Stage Two students will:

- understand, without repetition or rephrasing by the speaker, new vocabulary, short statements, directions, and questions which are expressed clearly at a natural rate of speed in face-to-face communication or on tape and which are chosen from topics or literature that they have studied during Stage Two
- understand, usually without repetition or rephrasing by the speaker, the key information or ideas in short conversations which contain familiar vocabulary and structures
- understand, after repetition and with some visual or concrete aids, the key information or ideas in short stories, conversations, poems, skits, songs, oral presentations by peers or the teacher, directions, news items, or advertisements which contain vocabulary and structures that they have studied during Stage Two
- recognize important differences in pronunciation or vocabulary between two varieties or two levels of the language under study; for example, between standard French as it is spoken in France and as it is spoken in Ontario or between formal and colloquial Canadian English
- participate in unrehearsed conversations with peers and the teacher on familiar topics of personal relevance

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[1] In this document *familiar* refers to language that the students have already encountered in the program.

Stage Three
In addition to demonstrating competence in the listening skills acquired during Stages One and Two, by the end of Stage Three students will:

- understand, without repetition or rephrasing by the speaker, new vocabulary, phrases, explanatory statements, instructions, narratives, questions, and dialogues which are chosen from topics or literature that they have studied during Stage Three and which are expressed clearly at a natural rate of speed by native speakers in face-to-face communication, over a telephone, or on tape or sound-track
- understand, usually without repetition but with graphic or visual aids, the key ideas in live and recorded conversations, radio broadcasts, advertisements, stories, short plays, film sound-tracks, or poems which contain familiar vocabulary, idioms, and structures and verb forms expressing present, past, and future time, as well as some more complex, high-frequency forms of the verbs used to describe, relate, express wishes, request, inquire, and hypothesize
- understand and participate in unrehearsed conversations with peers, the teacher, and native speakers on familiar topics of personal relevance

Stage Four
In addition to demonstrating competence in the listening skills acquired during Stages One, Two, and Three, by the end of Stage Four students will:

- understand, without repetition or rephrasing by the speaker, most of the main ideas and supporting details of longer samples of sustained spoken language on both familiar and partially familiar topics, which are expressed in standard form and include all high-frequency verbal tenses, moods, and voices
- be able to demonstrate understanding of short interviews, oral presentations, dialogues, debates, plays, or items from the media by making notes on, summmarizing, or transcribing selected passages that are dictated
- understand samples of familiar language which are expressed in both standard and colloquial levels of language
- understand longer or more complex passages of spoken language which are used to express humour, fantasy, or poetry or to provide a technical report on a topic of interest and which are appropriate to their age
- understand and appreciate the social and cultural references and nuances beyond the surface meaning which are expressed or implied through language and which are appropriate to their age

Stage Five
In addition to demonstrating competence in the listening skills acquired during Stages One, Two, Three, and Four, by the end of Stage Five students will:

- understand sustained discourse or presentations on familiar and unfamiliar topics, which are expressed at a natural rate of speed by native speakers, in person or on film, radio, or recording, and which contain a range of literary and non-literary uses of the language
- understand formal, idiomatic, and colloquial language when it is used to discuss topics of personal relevance or interest

Reading

Stage One

By the end of Stage One students will:

- be able to read short, simple passages and demonstrate global understanding of them
- be able to read and understand short phrases, sentences, and paragraphs in signs, notices, stories, plays, and poems which are written in simple language and use familiar vocabulary
- begin to use, in their reading, phonic and context cues and sight recognition to help them understand the material and predict its meaning
- be able to select from a library books or magazines in the second language which are appropriate to their reading ability, interests, and age
- be able to demonstrate satisfaction and enjoyment from their reading

Stage Two

In addition to demonstrating competence in the reading skills acquired during Stage One, by the end of Stage Two students will:

- understand familiar vocabulary and expressions in newspaper and magazine articles, advertisements, brochures, and computer texts that are written primarily for native speakers
- understand longer phrases, sentences, paragraphs, and stories which contain familiar vocabulary and structures and which are mainly descriptive or narrative
- be able to deduce, infer, and predict meaning, using textual and visual cues, in readings on familiar topics
- be able to select the main ideas and key information in a variety of short readings which contain primarily familiar language
- use a library to obtain reading material for personal enjoyment and information
- be able to demonstrate continuing satisfaction and enjoyment from reading longer and more complex passages

Stage Three

In addition to demonstrating competence in the reading skills acquired during Stages One and Two, by the end of Stage Three students will:

- after preparation or with considerable graphic assistance, be able to read and understand the main ideas and most of the supporting details in a literary text or piece of continuous prose which is several pages long, which is written for native speakers, and which deals with familiar topics or topics of personal interest
- be able to read, for global comprehension and enjoyment and with some reference to dictionaries or other vocabulary aids, short stories, magazine articles, short novels, plays, or poems which contain primarily familiar vocabulary and structures and which may include references to present, past, and future events and simple hypotheses
- be able to read and understand authentic signs, notices, captions, and simple advertisements when these are placed in context and do not contain highly-technical vocabulary

Stage Four

In addition to demonstrating competence in the reading skills acquired during Stages One, Two, and Three, by the end of Stage Four students will:

- after some preparation or with a dictionary or other vocabulary aids, be able to read, for global comprehension and enjoyment and with facility, texts and literature of increasing complexity and sophistication, such as novels, plays, short essays, and newspaper or magazine articles on current issues or items of interest, which contain mainly familiar or high-frequency unfamiliar vocabulary and structures
- with preparation or assistance, be able to read and understand academic texts which have been prepared for native speakers of a similar age and maturity level and which relate to areas of the curriculum under study, such as social studies, mathematics, or health education
- be able to make more accurate predictions and inferences as a result of being able to read with increased facility and understanding

Stage Five

In addition to demonstrating competence in the reading skills acquired during Stages One, Two, Three, and Four, by the end of Stage Five students will:

- be able to read for information, with almost complete comprehension and at normal speed, expository and literary texts on topics of personal relevance which are written for native speakers

- be able to read, for global comprehension and enjoyment and with infrequent references to a dictionary or other vocabulary aids, longer stories, novels, plays, or non-fiction texts which are written for native speakers of the same age
- be able to read and understand with ease academic texts in various curriculum areas which are written for native speakers of the same age

Speaking

Stage One

By the end of Stage One students will:

- be able to read aloud short phrases, sentences, or paragraphs with sufficient accuracy to be understood by a native speaker of the language under study
- be able to respond to directions or questions on familiar topics
- be able to converse about and discuss topics of personal relevance with the teacher or peers
- be able to express some wishes, likes, and dislikes
- be able to acquire information or assistance by asking questions
- be able to describe, narrate, give instructions, and make comparisons
- be able to create short dialogues, skits, and oral compositions, using recombinations of previously learned language
- be able to demonstrate satisfaction and enjoyment from their ability to express themselves in simple language on topics of personal relevance

Stage Two

In addition to demonstrating competence in the speaking skills acquired during Stage One, by the end of Stage Two students will:

- be able to express wishes, likes, and dislikes and to participate in short conversations and discussions on topics of personal relevance
- be able to use accurate pronunciation and intonation and appropriate gestures or body language to help them convey meaning
- be able to narrate events, using a series of linked sentences and high-frequency structures to show present, past, and future time
- be able to use correctly in a variety of situations the required formal and informal forms of address
- be able to express clearly and with coherence some ideas, opinions, and emotions
- be able to give a series of directions
- be able to retell in their own words the key elements of a short narrative or dialogue that they have heard or read
- be able to create and present short oral summaries, reports, or dramatizations
- be able to solve problems through participation in simple language games or simulations
- be able to conduct brief interviews with peers, the teacher, or native speakers

Stage Three

In addition to demonstrating competence in the speaking skills acquired during Stages One and Two, by the end of Stage Three students will:

- be able to participate in longer and more complex discussions and conversations on topics of personal relevance, either face-to-face or over the telephone
- be able to use, with some hesitation and errors, high-frequency, non-literary verb forms to describe, narrate, persuade, report, summarize, debate, and hypothesize

- be able to make themselves understood by patient and understanding native speakers in a limited range of social situations in which clear communication is important for survival, such as buying or ordering food or meals, seeking directions or accommodation, explaining that they are not well, or asking for assistance
- be able to use appropriately in specific situations certain forms of both formal and informal speech

Stage Four

In addition to demonstrating competence in the speaking skills acquired during Stages One, Two, and Three, by the end of Stage Four students will:

- be able to initiate, participate in, sustain, and conclude longer conversations on topics of general interest related to everyday life, school, or work, with or without preparation and with infrequent hesitations but with some errors in pronunciation, vocabulary, structure, or level of language
- be able to express ideas, wishes, and opinions and provide general information on a variety of everyday topics to native speakers
- be able to describe or narrate events in detail and provide supporting detail for opinions
- be able to link phrases and sentences together coherently and demonstrate mastery of a range of structures needed to express time, distinguish fact from fiction or speculation, and summarize or synthesize
- be able to make appropriate and effective use of paraphrase or circumlocution to make up for gaps in vocabulary or structures

Stage Five

In addition to demonstrating competence in the speaking skills acquired during Stages One, Two, Three, and Four, by the end of Stage Five students will:

- be able to converse easily with native speakers on a variety of familiar topics or unfamiliar topics that are not technical or abstract, making only a few errors in pronunciation, vocabulary, or structures
- be able to give effective prepared oral presentations using appropriate levels of language and a wide range of vocabulary and structures
- be able to respond quickly and accurately in impromptu situations that require brief oral responses of a non-technical nature
- after a brief orientation period, be able to participate easily in school or work situations that require a command of the language under study
- be able to use pitch, stress, and intonation as well as idioms and current colloquial language effectively and appropriately, making very few errors

Writing

Stage One

By the end of Stage One students will:

- be able to select and write correctly the vocabulary and idioms required to complete a short paragraph
- with visual or auditory clues, be able to identify in writing selected items from a situation or series of events
- be able to describe or narrate in very short sentences situations and events dealing with familiar topics
- with assistance, be able to create very short skits, stories, or poems
- be able to make short notes on or transcribe words, phrases, and short sentences that are dictated
- be able to demonstrate satisfaction and enjoyment from their ability to write in simple language

Stage Two

In addition to demonstrating competence in the writing skills acquired during Stage One, by the end of Stage Two students will:

- know how to express briefly and clearly in writing some opinions, attitudes, emotions, and ideas
- be able to write, accurately using present or past time, a description, narrative, or news bulletin in simple sentences or a short paragraph
- be able to write a short, persuasive advertisement or commercial, with or without visual accompaniment

- be able to create a very short, coherent composition, dialogue, script, report, or poem on a familiar topic of personal relevance
- be able to make notes on or transcribe a short paragraph or dialogue that is dictated

Stage Three

In addition to demonstrating competence in the writing skills acquired during Stages One and Two, by the end of Stage Three students will:

- be able to write short, original compositions, summaries, reports, or letters of four to eight connected paragraphs on personal experiences or on familiar topics of personal interest, including the school curriculum
- be able to write, with only a few errors, messages, captions, notes, descriptions, narratives, or summaries whose main ideas can be understood by native speakers
- know how to use, in their writing, appropriate high-frequency verbal forms or other language structures to express present, past, and future time and simple hypotheses
- know how to complete forms or questionnaires on familiar topics
- be able to write simple personal letters using appropriate conventions for salutations and endings

Stage Four

In addition to demonstrating competence in the writing skills acquired during Stages One, Two, and Three, by the end of Stage Four students will:

- be able to write, with some grammatical or spelling errors, longer, original compositions, reports, bulletins, letters, summaries, or notes on a variety of general-interest or school-related topics
- be able to communicate to native speakers, clearly and coherently in writing, with some grammatical or spelling errors, ideas and factual information of general interest or personal relevance
- know how to use effectively and appropriately, in their writing, all verb tenses and moods or their equivalents, except those that are used only in highly formal, traditional, or literary writing
- be able to write short business letters, using appropriate conventions for salutations and endings

Stage Five

In addition to demonstrating competence in the writing skills acquired during Stages One, Two, Three, and Four, by the end of Stage Five students will:

- using dictionaries or other reference aids, be able to write expositions, descriptions, and narratives, with facility approaching that of a native speaker
- know how to use effectively, in their writing, a variety of linguistic techniques and stylistic devices to achieve their purpose; these will include synonyms, metaphors, parallelism, hyperbole, and humour and a range of both formal and idiomatic language
- with some assistance from others, be able to complete effectively and appropriately all second-language writing activities at school and/or work

Cultural Understanding

Stage One

By the end of Stage One students will:

- be aware of many similarities between themselves and their peers who are native speakers of the language under study
- recognize certain differences, where these exist, in customs, tastes, foods, schooling, or family life between themselves and native speakers of the language under study
- know, where applicable, some of the places where the language under study is spoken; for example, French is spoken in Ontario, in other parts of Canada, and throughout the world

Stage Two

In addition to maintaining the positive attitudes developed during Stage One, by the end of Stage Two students will:

- be able to identify some interests, customs, traditions, values, and attitudes which may be considered a part of the culture of their peers who are native speakers of the language under study and which may be both similar to and different from their own
- recognize that speakers of the language under study may come from various cultural backgrounds
- recognize that speakers of the language under study have made or can make important cultural contributions to a pluralistic Canadian society
- be proud of their own cultural heritage and at the same time respect and value other cultures
- be able to identify some specific regions and/or countries where the language under study is spoken, where applicable
- be able to demonstrate openess toward and interest in learning more about the culture(s) related to the language under study

Stage Three

In addition to maintaining the positive attitudes developed during Stages One and Two, by the end of Stage Three, students will:

- show appreciation of different points of view which have their origin in different cultures
- be aware of how the culture(s) related to the language under study is/are reflected in samples of literature or items from the media
- recognize some stereotypical portrayals of the culture(s) related to the language under study and know how these should be changed to remove bias
- after preparation, follow, in certain specific social situations, generally accepted behaviour for the culture related to the language under study; for example, bowing to show the appropriate degree of respect when greeting a Japanese person

Stage Four

In addition to maintaining the positive attitudes developed during Stages One, Two, and Three, by the end of Stage Four students will:

- be able to interact with members of the culture(s) related to the language under study while demonstrating acceptable behaviour in a variety of social situations
- appreciate and understand cultural references that they encounter in their examination of the literature, arts, media, social and political institutions, and history of the culture(s) related to the language under study
- know about men and women representing racial and ethnic minorities who have made valuable contributions to the culture(s) related to the language under study

Stage Five

In addition to maintaining the positive attitudes developed during Stages One, Two, Three, and Four, by the end of Stage Five students will:

- be able to describe and interpret aspects of the culture(s) related to the language under study
- be able to apply their knowledge and skills to a variety of new and more complex situations, such as the study of an additional language and culture

Language-Learning Awareness

Stage One
By the end of Stage One students will:

- know that a variety of languages may be spoken by their classmates, their schoolmates, members of their community, and people in Canada and the world
- know that most languages are spoken and written in different ways by different communities
- be able to identify and use some essential language-learning strategies, such as asking questions to obtain clarification, definition, or rephrasing, or keeping a personal journal to help develop language skills and correct mistakes
- understand that language learning is facilitated when they work co-operatively with classmates in pairs or in groups
- recognize and appreciate their own ability to express some facts, ideas, or emotions in a second language
- understand and accept that making mistakes is a natural part of learning a second language
- be able to identify some major similarities and differences between the sound system and writing codes of English or French and those of the language(s) under study
- place value on the learning of their first language and of other languages and enjoy learning them

Stage Two
In addition to maintaining the positive attitudes towards language learning developed during Stage One and demonstrating competence in applying the language-learning strategies that they have acquired, by the end of Stage Two students will:

- understand that languages evolve slowly over time, have their origins in other languages, and can be grouped in families
- through the study of examples drawn from French or English and the language(s) under study or the language(s) spoken by the student, recognize that languages often borrow from each other
- be able to ask more complex questions to obtain information, using the language under study; for example, "How do you say in French...?" "What is the Cree expression for...?" "Please repeat a little more slowly!" "Is that word singular or plural?"
- understand that language has different functions, such as explaining, narrating, describing, persuading, etc.
- be able to identify stages in the process of writing and use these stages to develop writing skills
- know how to use dictionaries and reference books to help them develop their personal inventory of vocabulary and language structures
- be able to use circumlocution when they do not know the exact words or phrases they need to communicate their desired message
- be aware of some uses of current technology, such as audiotapes and videotapes, word-processing, and computer graphics, in supporting the development of language skills
- demonstrate interest in continuing their study of languages

Stage Three
In addition to maintaining the positive attitudes towards language learning developed during Stages One and Two and demonstrating competence in applying the language-learning strategies that they have acquired, by the end of Stage Three students will:

- be able to identify samples of cognates between English or French and the language(s) under study
- be able to distinguish among formal, informal, and colloquial uses of language while discussing familiar topics
- understand some basic grammatical terminology and apply this understanding to their learning of language
- know how to use standard shorter dictionaries, both to find English equivalents and to find meanings in the language under study
- recognize and be able to use effectively methods of communication that support oral and written language, such as gestures, visuals, graphics, signs, media, and other technology
- be able to do research on topics under study in the second language by selecting, understanding, organizing, and summarizing information for specific tasks
- identify important elements of the reading process, such as predicting, inferring, reading for the main idea, etc.

Stage Four

In addition to maintaining the positive attitudes towards language learning developed during Stages One, Two, and Three and demonstrating competence in applying the language-learning strategies that they have acquired, by the end of Stage Four students will:

- understand that each language or variety of language has its own discourse practices rooted in the values and beliefs of the community in which it is spoken
- know that varieties of language may have a certain status attached to them
- understand the impact of using socially inappropriate language in certain situations
- understand that language, both first and second, varies according to the purpose for which it is used; such purposes might include exchanging information, complaining, praising, encouraging, or persuading
- be able to make some comparisons among languages to show that language, as an arbitrary system, can lead different communities to view concepts and their world in very different ways
- be able to demonstrate awareness and appreciation of the varieties of spoken and written language and of change, over time, in the use of language

Stage Five

In addition to maintaining the positive attitudes towards language learning developed during Stages One, Two, Three, and Four and demonstrating competence in applying the language-learning strategies that they have acquired, by the end of Stage Five students will:

- demonstrate their ability to apply language-learning strategies in increasingly complex situations either during the study of an additional language and/or in direct communication with native speakers of the language(s) under study

Outcomes for the Arts

A. Understanding Form in the Arts

1. be able to recognize and describe the form and aesthetic qualities of art works from each of the arts, as well as the aesthetic qualities of objects and materials in the natural and human-made worlds
2. be able to discuss the use of elements, techniques, and concepts in each of the arts, using appropriate terminology

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
understand that a work of art consists of many components	demonstrate an understanding of ways in which the components of a work of art work together to make a meaningful whole	demonstrate an ability to make judgements about the aesthetic effectiveness of the use of essential elements in works in each of the arts
understand that drawing, improvising, organizing sounds, and sequencing movements are fundamental skills in specific arts	plan and execute artistic works that make use of drawing, improvisation, organization of sounds, and/or sequencing of movements	critique the use of drawing, improvisation, organization of sounds, and sequencing of movements in their own and others' work
use appropriate terms in discussing their own artistic ideas	use appropriate terms in discussing their own artistic ideas as well as general artistic concepts	critique works of art, using appropriate terms in discussing artistic concepts and in expressing personal opinions
identify and describe artistic choices, using appropriate terminology	analyse and defend artistic choices, using appropriate terminology	analyse and critique their own and others' artistic choices, using criteria developed from their understanding of aesthetic principles
describe works of art by making reference to arts concepts and techniques	identify various styles, techniques, themes, and design concepts in familiar works of art	analyse the style, techniques, and themes of works of art, and evaluate the appropriateness of the medium and effectiveness of the design as a means of expressing the content
understand that works of art from various cultures have similarities as well as differences	describe, using appropriate terminology, ways in which artists in various cultures have used similar tools, materials, elements, and processes	describe, using appropriate terminology, ways in which artists in various cultures have used similar tools, materials, elements, and processes, yet have expressed ideas and feelings in unique ways through the arts
know which school activities are activities in the arts	understand that the arts have many aspects of form in common	demonstrate understanding of those components of the arts that are specific to dance, drama, music, and the visual arts, and those that are common to all the arts, and use this knowledge as a basis for choosing subsequent studies in the arts

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
understand that technology can be used in creating works of art	understand that technology has had an impact on artistic processes and products	demonstrate understanding of the historical impact of technology on various artistic processes and products
demonstrate awareness that elements (such as rhythm) and principles (such as balance) in the arts can also be found in daily life	identify aesthetic qualities and principles of form that are also evident in the world around them	apply the skills and aesthetic judgement developed in the study of the arts in other activities both in and out of school
be aware that the senses play a role in the acquisition of knowledge	understand that aesthetic qualities can be perceived with the senses in the world around them	use their senses to perceive aesthetic qualities in natural and human-made materials and objects in the world around them

B. Exploring Meaning in the Arts

By the end of Grade 3, students will: *By the end of Grade 6, students will:* *By the end of Grade 9, students will:*

3. be able to describe their sensory, emotional, and intellectual responses to works in each of the arts and offer an interpretation of the meaning of the works

4. be able to consider a variety of other responses to and interpretations of the works, as part of the process of reflecting on and refining their own opinions

5. be able to recognize and promote excellence and originality in performance and presentation

6. be able to explore and express ideas and feelings through the arts, and appreciate the ideas and feelings expressed in art works by others

demonstrate a personal response to works of art, including live performances and film	demonstrate a personal and critical response to works of art, including live performances and film	demonstrate awareness of their sensory, emotional, and intellectual responses to works of art, including live performances and film
recognize that they can develop self-awareness through participating in artistic activities	understand that they can develop self-awareness and social skills through participation in artistic activities	demonstrate an understanding that the self-awareness and social skills developed through study of the arts have a wider application in their lives
recognize that the arts can reflect changes in social customs and attitudes	understand ways in which the arts can reflect social and political conditions	understand some ways in which art works can prepare the way for more widespread changes in social and political conditions and in intellectual attitudes

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
understand that personal satisfaction can be attained through planning and completing a work of art	understand the value of experiencing personal satisfaction in planning and completing a work of art	explain the importance of gaining personal satisfaction from conceiving the idea for a work of art, planning the work, and completing it
recognize that messages can be expressed through various artistic media	explain how messages can be expressed through various artistic and commercial media	recognize and analyse ways in which subliminal messages can be expressed through various artistic and commercial media
recognize that different styles in the arts may originate with different peoples	recognize that different styles in the arts are products of different social and cultural milieus	demonstrate understanding that different styles in the arts may be due in part to the artists' desire to give expression to aspects of their social and cultural milieu
understand that social conditions can be portrayed in works of art	demonstrate an awareness that works of art may contain commentary on social conditions and attitudes	demonstrate understanding of some ways in which works of art express social criticism

C. Understanding the Function of the Arts

By the end of Grade 3, students will: | *By the end of Grade 6, students will:* | *By the end of Grade 9, students will:*

7. be able to derive personal enjoyment and intellectual and emotional enrichment from participation in the arts

8. be able to relate experiences in the arts to their personal perceptions and circumstances in order to deepen their insight into their own thoughts and lives

9. have a deeper understanding of other people, places, times, and cultures

10. recognize ways in which works of art are influenced by and illuminate the political, economic, cultural, and social milieu and the environmental conditions of the time when they were created

11. understand the connections among individuals and groups and appreciate the universality of human experience through study of the arts

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
recognize that works of art can affect the emotions	recognize that works of art can affect the emotions and have an influence on behaviour	demonstrate knowledge of some ways in which works of art can affect the emotions and influence behaviour
understand that the arts have many aspects in common and can stand alone as a subject area	understand that there are links between the arts and other subject areas	demonstrate an awareness of some specific links between the arts and other subject areas

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
demonstrate an awareness of the services and facilities connected with the arts in their community	know about some of the services and facilities connected with the arts in their own and other communities	make use of services and facilities connected with the arts in their own and other communities
recognize ways in which individuals contribute to the cultural life in their community	understand which abilities are needed to enable them to contribute to the cultural life in their community	demonstrate an ability to contribute to the cultural life in their community
recognize that everyone can participate in activities in the arts	recognize that occupational stereotyping and discrimination exist in the arts world	understand reasons for rejecting occupational stereotyping and discrimination in the arts world
understand that they are expected to behave in an appropriate way when attending concerts, galleries, theatres, and recitals	demonstrate knowledge of appropriate behaviour at concerts, galleries, theatres, and recitals	demonstrate knowledge of conventions of audience behaviour at concerts, galleries, theatres, and recitals
understand that there are employment opportunities in the arts	recognize that there are employment and career opportunities in the fine, commercial, and applied arts	demonstrate knowledge of their own potential and aspirations with regard to a career or other employment in the fine, commercial, and applied arts
know that people of different races and cultures in Canada and other countries have made contributions to the arts	describe contributions to the arts made by people of different races and cultures in Canada and other countries	describe and appreciate contributions to the arts made at various times by people of different races and cultures in Canada and other countries
understand that stereotyping, prejudice, and discrimination can be found in art works	identify examples of stereotyping, prejudice, and discrimination in art works	analyse critically how stereotyping, discrimination, and prejudice are depicted in art works
demonstrate an awareness of Native and folk art in Canada	demonstrate knowledge of Native, folk, and contemporary art in Canada	demonstrate an understanding of the historical and cultural significance of Native, folk, and contemporary art in Canada
demonstrate an awareness that cultural traditions can be preserved and modified through works of art	demonstrate an awareness that cultural traditions can be preserved and challenged through works of art	demonstrate an awareness that social conditions can be portrayed and viewed critically in works of art and that styles of artistic expression may reflect widespread changes in attitudes

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
understand that works of art can depict conflict	understand that conflicts can be resolved through participation in creative projects and within the art works themselves	demonstrate some ways in which conflicts can be resolved through participation in creative projects and within the art works themselves
recognize and respect others' artistic viewpoints	recognize the necessity for interpersonal and problem-solving skills, as well as respect for others' artistic viewpoints, in participating in artistic activities and projects	demonstrate interpersonal and problem-solving skills, as well as respect for others' artistic viewpoints, in activities and projects in the arts
understand that they are producers and supporters of the arts	demonstrate an ability to articulate the reasons for their interest in specific types of artistic endeavours and products	demonstrate skills that will help them become lifelong producers and supporters of the arts
demonstrate fundamental skills in working with others on artistic projects	demonstrate skills in working with others on artistic projects	demonstrate an ability to work creatively and effectively with others on artistic projects

D. Communicating Through the Arts

By the end of Grade 3, students will: *By the end of Grade 6, students will:* *By the end of Grade 9, students will:*

12. **be able to use a variety of tools, materials, processes, and techniques in each of the arts to create works of their own that show an understanding and appreciation of aesthetic principles**
13. **understand and use appropriately symbols, signs, graphics, and other technical means of expression in each of the arts**
14. **be able to explain the relationship between the structural and aesthetic qualities and the intended meaning of their own art works**
15. **be able to set personal goals for their learning and/or production in the arts, and monitor and evaluate their progress**

recognize that sounds can be represented by symbols	know that sounds can be translated into symbols and symbols into sounds	know how to translate sounds into symbols and symbols into sounds
use commonly available materials to achieve an artistic effect	use various kinds of natural and human-made materials to achieve an artistic effect	demonstrate skill in the artistic use of both natural and human-made materials
demonstrate through creative activities that they have developed knowledge and skills in the arts, as well as understanding of the value of studying the arts	demonstrate through creative activities that they have continued to develop their knowledge and skills in the arts, as well as their understanding of the value of studying the arts	demonstrate through creative activities that they have developed further their knowledge and skills in the arts, as well as their understanding of the value of studying the arts

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
demonstrate understanding that the body can be one of the instruments of the arts	know that a balanced diet and general fitness are important in enabling them to participate in arts activities	demonstrate their understanding that a balanced diet and general fitness are important in enabling them to practice and perform
recognize arts tools and materials and use them in a safe manner	know how to use arts tools and materials safely and also how to store them safely	know how to use arts tools and materials safely, and understand the need for safe practices in all artistic activities
demonstrate awareness of some of the possibilities that technology offers the arts	know how to use technology to explore ways of expressing ideas and feelings in the arts	select and use the appropriate technology to plan and realize an artistic project and achieve a desired effect
organize classroom productions and exhibitions	organize and produce classroom productions and exhibitions	initiate, organize, produce, and evaluate classroom productions and exhibitions
use artistic symbols, materials, and styles in various art works	demonstrate an understanding of the relationship among symbols, materials, and styles in the arts	demonstrate literacy in the arts through the use of symbols, materials, and styles
use vocal sounds and other sounds, body movements, and symbols from different cultures in simulated and real situations	demonstrate and analyse the use of vocal sounds and other sounds, body movements, and symbols from various cultures in simulated and real situations	demonstrate through performances and presentations that vocal sounds and other sounds, body movements, and symbols from different cultures can be used in art works to convey meaning
recognize that environmental topics can be explored through creative projects in the arts	communicate messages on environmental topics through creative projects in the arts	comment on environmental concerns through creative projects in the arts
be aware that feelings and emotions can be evoked through art works	understand that feelings and emotions can be evoked through using the elements of the arts	demonstrate that feelings and emotions can be evoked through manipulation of the elements in each of the arts
show an understanding of basic performance and presentation conventions in the arts	demonstrate, as a participant, an understanding of performance and presentation conventions in art forms of various cultures	demonstrate an understanding of performance and presentation conventions through actual experiences in each of the arts
recognize that certain elements in the arts can be best understood through participation in performing and creative activities	recognize and begin to demonstrate a conceptual understanding of the elements of the arts through performing and creative activities	demonstrate a conceptual understanding of the elements of each of the arts through performing and creative activities

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
use personal experiences as subject matter in a variety of artistic endeavours	use sensory experiences, ideas, emotions, images, and creative energy in a variety of artistic endeavours	demonstrate skill in making use of sensory experiences, ideas, emotions, images, and creative energy in a variety of artistic endeavours
recognize that each of the arts communicates through its own elements, materials, structures, and styles	recognize that the elements, materials, structures, and styles in each of the arts can be used to communicate aspects of the traditions of various cultures	use the elements, materials, structures, and styles in each of the arts to communicate aspects of the traditions of various cultures
demonstrate awareness of ways in which the arts enrich their emotional and intellectual life	demonstrate that they can participate in creative activities that enrich both their intellectual and emotional life and that of their classmates	demonstrate that they can participate in creative activities that enrich their intellectual and emotional life and contribute to their total well-being

Outcomes for Self and Society*

A. Meaningful Participation: The Individual in Society

1. be able to visualize and evaluate possible futures for themselves and their world
2. be able to use knowledge of their strengths, interests, and aspirations to set goals and undertake educational and career planning
3. understand how aspects of their personal identity may affect their opportunities for realizing their personal and career goals
4. know what means are available for achieving their goals
5. understand how career/occupational choices affect all aspects of a person's life
6. recognize the ways in which global and environmental issues and factors may affect their career and lifestyle opportunities
7. be able to use relevant information to make responsible personal choices about health, lifestyle, and relationships, and value participation in group and individual physical activities
8. know about and be able to use a variety of learning and decision-making strategies
9. be willing and able to resolve conflicts in a co-operative and non-violent manner
10. be willing and able to contribute to social change through peaceful, democratic action

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
participate in the games, gymnastics, and dance activities provided in the school's daily physical education program	participate in the games, gymnastics, and dance activities provided in the school's daily physical education program	participate in a school's daily physical education program that includes music, movement, and dance activities, gymnastics, individual, small-group, and large-group activities, fitness activities, outdoor activities, recreational activities, and aquatic activities (where facilities and expertise permit)
use effectively a variety of communicative strategies to interact with peers, parents, and others	recognize that regular physical exercise enhances their ability to explore and gain enjoyment from their surroundings	make lifestyle choices that contribute to their well-being and maintain a commitment to those choices through self-monitoring, self-evaluation, and self-reinforcement
work independently and with others	work independently and with others	begin to understand some of the physical, emotional, social, and spiritual aspects of human sexuality and their effects upon self-esteem and relationships with others
accept responsibility, to a degree appropriate to their age and grade, for personal choices, friendships, schoolwork, and behaviour during leisure time	identify and use effectively a variety of communicative strategies to interact with others	understand the concept of peer pressure and distinguish between group values and personal values and responsibilities
identify and perform a service in the school community or at home and evaluate the experience	remember, describe, and apply safety rules associated with indoor and outdoor activities in the home, school, and community and know and describe ways of obtaining emergency help	
identify and describe the effects of lack of exercise on themselves and their peers and the short- and long-term benefits of regular physical exercise	identify and describe conditions that contribute to a healthy lifestyle, assess their own lifestyle, and suggest ways of improving it	
explain the importance of a balanced diet and describe the nutritional value of various foods	identify ways in which they are responsible for the well-being of their peers	

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*The specific learning outcomes for Grades 3, 6, and 9 are not presented in a sequential manner across the grades because a developmental progression from one level to the next is not always appropriate.

By the end of Grade 3, students will:

determine whether their personal eating patterns are healthy and whether their meal and snack choices have a positive or negative impact on the environment (i.e., in terms of compostability of packaging)

remember and apply rules of safety and know about obtaining emergency help

identify people in the community who provide safety services and describe their roles

understand the difference between prescription and non-prescription drugs and the rules for their safe use

recognize and report behaviour that can threaten their safety *(e.g., abuse, violence)*, whether outside or within the family

identify and apply a variety of social skills appropriate to different settings and situations

identify and describe relationships within a family and recognize that there are different types of families

identify various ways in which people express emotions and distinguish between acceptable and unacceptable ways

identify some of their personal strengths, interests, achievements, and aspirations and relate them to possible future educational and occupational choices

compare a variety of occupations in the school and community

By the end of Grade 6, students will:

identify and begin to apply the skills necessary to achieve success in school

recognize and report behaviour that can threaten their safety *(e.g., abuse, violence)*, whether outside or within the family

understand and discuss aspects of human sexuality that are relevant to them

understand basic information about communicable diseases, about the body's ability to resist and fight disease, and about the safe use of medicine and drugs

understand that drugs can affect the way the body functions, that there are good and bad uses of drugs, and that drugs can be harmful if misused

understand and discuss information about drugs and tobacco: their effects on the body, the reasons why people use them (including peer/societal pressure), and the rights of non-smokers

evaluate their own knowledge and abilities and begin to see them in relation to their career aspirations and opportunities

identify and perform a service within the school and evaluate the experience

use a variety of strategies to gather relevant information in order to make considered consumer choices *(e.g., comparison shopping, Better Business Bureau questioning techniques)*

By the end of Grade 9, students will:

think critically about and discuss information about child abuse, spousal abuse, sexual assault, and other forms of violence and identify appropriate strategies to address such forms of violence

investigate and assess factors that influence personal decision-making

examine the possible effect of their personal choices on the broader community

make considered decisions based on knowledge of their personal needs, aspirations, and values and of what makes for a healthy lifestyle and wise use of resources

act as a mentor, providing responsible guidance and assistance to others

understand issues and information related to contraception, Acquired Immune Deficiency Syndrome (AIDS), and sexually-transmitted diseases

describe the types and sources of nutrients and ways in which diet affects health

examine dieting, eating disorders, and fad diets in the context of information about good nutrition

identify and perform a service activity and evaluate the experience

develop and participate in an activity related to a global and/or environmental issue and evaluate its impact

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
describe ways in which individuals can contribute to their own future well-being and that of their community, society, and the global community	understand that a career encompasses all aspects of their lives, including education, work, leisure, and family life	examine ways in which their own abilities, interests, aspirations, and needs may be relevant to their future educational and career opportunities
	understand and discuss the relationship between education and various careers	investigate and compare a variety of occupations they are interested in
	gather information about careers and use it in thinking about possible personal career choices	investigate and compare the educational paths that lead to different occupations
	act (independently and in groups) in ways that will contribute to their own well-being and that of society and the global community	develop plans and make decisions related to their educational and occupational future
		evaluate and discuss ideas about the role of leisure in a well-balanced life

B. Understanding Diversity

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*

11. know about and value the contributions of people from a wide variety of cultures, races, religions, socio-economic backgrounds, and abilities, in the school, the community, Canada, and the world
12. understand and appreciate the similarities and differences among various peoples
13. appreciate both their own uniqueness and worth and those of every individual, including elders and people with special needs
14. understand and appreciate the experiences of people who have successfully faced various challenges
15. understand the influence of cultural and family traditions on the choices and decisions made by individuals and groups
16. know about the history of Canada and understand the perspectives of the different groups who played a part in that history
17. understand how differing climatic conditions, geographic features, and natural resources in various parts of Canada affect the choices that people, businesses, and industries make with respect to settlement and location
18. understand and acknowledge the rights of individuals and groups and be willing to carry out their responsibilities as citizens in the home, school, community, and workplace, and to work to bring about a more just society

understand and accept differences between their own and their family's beliefs and attitudes and those of others	investigate the culture of their ancestry and explain why they value it	identify and define their own beliefs, attitudes, and aspirations and discuss the factors that have shaped them
	compare their own and their family's beliefs and attitudes with those of others	

By the end of Grade 3, students will:

identify and describe characteristics that make their class, school, and community unique

identify and discuss similarities and differences among environments in different regions of the earth, at both a local and a global level

value their own race, ethnocultural and linguistic background, gender, and faith, and respect those of others

recognize and understand the effect of such variables as gender, age, race, ethnicity, and disability on people's attitudes and opportunities

consider and describe their relationship to others within their home, school, and community

recognize and discuss the contribution of various cultures to their community

recognize and accept both similarities and differences among people

recognize both their own accomplishments and those of others

identify and describe both their rights and their responsibilities as members of their community

By the end of Grade 6, students will:

investigate the attitudes towards change in a variety of cultures

value their own race, ethnocultural and linguistic background, gender, and faith, and respect those of others

describe the outstanding accomplishments of a variety of individuals and groups in the community, province, and country

identify different roles performed by adults and children in the home, school, and community and recognize their worth

recognize ways in which views of occupational roles are influenced by stereotyping and bias

identify and communicate with members of the community, in a variety of walks of life, who are positive role models

recognize that men, women, and children have contributed to the development of Canadian society and discuss some of these contributions

understand similarities and differences among environments in different regions of the earth, at both a local and a global level, and investigate the human capacity to make use of different environments

identify and describe the role of Native peoples and other founding groups in the origins and early history of the province

By the end of Grade 9, students will:

demonstrate knowledge of a variety of cultural traditions and the ways in which cultural traditions influence the choices and decisions made by individuals and societies

recognize the importance of the principles of equity, equality before the law, human rights, and the rights of children, and understand the relevance of these principles in the context of home, school, community, and society in general

analyse issues that affect individual and social well-being, such as child abuse, spousal abuse, sexual assault, and other forms of violence, and identify appropriate strategies to address these issues

investigate and demonstrate knowledge of Canada's regional, physical, political, economic, and demographic diversity

investigate and discuss the characteristics and processes of human-made and natural geographic patterns

identify and discuss different views about a variety of Canadian issues

identify beliefs, attitudes, and aspirations that people from different cultural backgrounds hold in common and appreciate the importance of such shared values

analyse issues that affect the choice of location of people, businesses, industries, and government in Canada

investigate past and present global issues and demonstrate knowledge of their relevance to Canadian concerns

By the end of Grade 3, students will:	By the end of Grade 6, students will:	By the end of Grade 9, students will:
	examine the stories of different Native peoples and the contributions of Native men and women to Canadian life	demonstrate understanding of power relationships among individuals, within groups, in society, and in the world
	investigate and discuss specific events in Canadian history from the perspective of people from a variety of different backgrounds	analyse the ways in which the influence of family, peers, and the media shape their personal and consumer choices
	identify and analyse some of the systemic causes of inequities within their community	demonstrate understanding of the Native experience in Canada prior to European contact and from contact to the early twentieth century
	act to promote antiracist attitudes and behaviour within the school and broader community	demonstrate knowledge and appreciation of the role played by Native peoples, other founding groups, Canadian institutions, and the international community in the development of Canada
	understand that all men, women, and children have legal rights and obligations	reflect on and discuss issues related to Native identity and the future development of Native societies within Canada, North America, and the world
		analyse the role of immigration in the development of Canada and demonstrate understanding of the challenges that faced various immigrant groups
		demonstrate knowledge and appreciation of the culture and contributions of Franco-Ontarians
		understand and discuss reasons for business and government to work to strengthen Canada's role in international affairs and the global economy

C. Understanding Natural and Human-made Systems

19. understand and appreciate the relationship between Canada's land and its peoples – in the past, the present, and a variety of possible futures
20. understand the interdependence of people within a society and among societies within the global community
21. recognize power relationships in groups, society, and the international community and assess their causes and impact
22. understand the nature of Canada's relationships in the global community
23. understand the structures and functions of institutions and governments in their community and in Canadian society
24. understand and appreciate the role of business, industry, and labour in their locality and in Canada
25. understand and appreciate the ways in which culture may influence the ideas and behaviour of individuals and groups
26. understand the influence of technological developments on education, work, and leisure

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
demonstrate knowledge of their own and other cultural groups within the community	understand the nature and purpose of a variety of arts, religious, and service activities	make contact with various support agencies within the community and contribute to and/or use the services they offer
identify a variety of community institutions, groups, and services and describe their effect on or connection to the students' own lives	identify a variety of natural resources at the local, regional, and national level, and analyse them with respect to location, uses, methods of harvesting/extracting, renewability, etc.	explain the changes in land use in Canada over time
identify and use school and local community services and resources	examine ways in which human and natural systems are interconnected	understand the structures and functions of institutions and governments in Canada
recognize the value of all types of work	understand and discuss the effect of various activities of business, industry, and labour on our standard of living	explain the need for independent, entrepreneurial, and co-operative work skills for success in business, government, and industry
identify a variety of different places where a person might work	identify and analyse the influences on and interrelationships among local ecosystems	demonstrate an understanding of some past and present interrelationships among business, labour, and government
identify and analyse an ecosystem within the local community	examine and describe a fragile environment, explain the causes and effects of its fragility, and identify processes that preserve or destroy it	understand the ways in which cultural background influences individuals, groups, and social systems in Canada and around the world
investigate and demonstrate knowledge of how land and natural resources are used by people in Canada	identify and explain factors that influence the price and availability of goods and services	understand some important factors that influence supply and demand
identify and describe basic body systems	identify examples of interaction between the people of Canada and people of the world and outline some of the reasons for and effects of the interaction	demonstrate knowledge of the role of financial institutions in relation to both business and individuals
identify examples of interaction between the environment and human society in Canada and the world and explain some of the causes and effects that characterize the interaction		

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
express their own views and voice their concerns about environmental and global issues	describe a variety of institutions and governments in the province and in Canada	understand and discuss ways in which ethical considerations influence the decisions of business, labour, and government
identify ways in which technology influences their daily lives at home and school	examine and describe ways in which technology influences people's daily lives	identify a number of social and economic factors at the local, provincial, and national level and understand the ways in which they affect people's lives
		understand and discuss various activities of business, industry, and labour and the ways in which they affect our standard of living
		identify factors that motivate people to engage in entrepreneurial activities, with reference to a variety of types of ventures
		understand a variety of cultural, economic, demographic, environmental, and physical patterns at the local, national, and global level
		identify examples of interrelationships among people and products in Canada and the world and explain the reasons for their interdependence
		examine a number of global and environmental issues and describe the response to them of governments and non-governmental and private-sector organizations and interest groups
		outline ways of managing finite and renewable resources and of creating a "conserver society" in Canada
		use knowledge gained from studying past events to understand contemporary trends and develop informed hypotheses about possible future developments

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
		identify some key social, political, economic, and environmental issues and explain their relevance to the challenge of achieving "sustainable development"
		understand and evaluate the effects of technology on people's lives and the environment

D. Functioning in the Age of Information

By the end of Grade 3, students will: *By the end of Grade 6, students will:* *By the end of Grade 9, students will:*

27. understand that the ability to gather, evaluate, and use information is an important life skill in a technological society
28. be able to access, organize, process, and evaluate information from a variety of sources in an effective manner
29. understand ethical and legal issues related to the use of information and develop responsible and ethical practices with respect to information management
30. understand the role and recognize the importance of technology in managing information
31. be able to use technology appropriately to access, manage, analyse, and disseminate information

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
acquire information in a variety of ways and from a variety of sources: through viewing, observing, reading, listening, questioning, and through technological means	identify and use the appropriate means for locating and selecting information in different forms convey various kinds of information effectively	understand the ways in which appropriate information can increase their effectiveness in many endeavours and use a variety of means to locate and select needed information
understand a variety of ways in which information can be organized, analysed, interpreted, and stored	understand and use, in increasingly complex contexts, a variety of graphic symbols and conventions employed in different types of graphs, charts, models, and diagrams, with reference to reading and making maps (distance, scale, direction, location), telling time, observing, collecting, and recording data in field work, etc.	organize, analyse, interpret, and store information accurately
keep a record of school events and use it to complete daily activities and monitor their progress		employ appropriate skills to collect and record information on school, class, and personal events in order to complete daily activities, monitor their progress, and plan for the future
begin to understand and use a variety of graphic symbols and conventions employed in different types of graphs, charts, models, and diagrams, with reference to reading and making maps (distance, scale, direction, location), telling time, observing, collecting, and recording data in field work, etc.	use various types of technology to facilitate their work and enhance its presentation	convey various kinds of information accurately and responsibly

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
convey information through a variety of verbal and non-verbal means	organize, analyse, interpret, store, and retrieve information using a variety of means: cataloguing, calculating, synthesizing, comparing and contrasting, inferring, simulating, hypothesizing, entering and using data from computer information systems, memorizing, mind mapping	understand and use, with facility, graphic symbols and conventions employed in different types of graphs, charts, models, and diagrams, with reference to reading and making maps (distance, scale, direction, location), telling time, observing, collecting, and recording data in field work, etc.
detect bias in information and discuss how evidence of bias affects the usefulness of the information	employ appropriate skills to collect and record information on school, class, and personal events in order to complete daily activities and monitor their progress	examine and discuss some legal and ethical issues related to information management
propose a variety of alternative solutions for a problem	detect assumptions, points of view, and biases in information and evaluate the reliability of the information accordingly	evaluate the reliability of information and give valid reasons for their assessment
identify some present and possible future uses of a variety of information technologies	understand the present roles of information technologies in society and suggest possible future uses of such technologies	describe the roles of information technologies in personal life, the home, school, business, the workplace, and society as a whole, and discuss the risks and benefits of its use
		suggest some possible future uses of information technologies

E. Understanding and Managing Change

By the end of Grade 3, students will: *By the end of Grade 6, students will:* *By the end of Grade 9, students will:*

32. understand the causes of changes in various areas of life and their impact on themselves, their families, their communities, and society
33. understand the ways in which change affects individuals and institutions in business, labour, and government
34. understand the relationship between human activity and environmental changes
35. understand the ways in which societies change in response to local and global events
36. recognize and be able to use effective strategies to manage change and embrace it with confidence

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
describe some of the changes that have happened to them and that will happen as they grow and develop	understand and explain the relationship between the stages in their personal growth and changes in their roles, responsibilities, needs, capabilities, and interests	define change and discuss some of its effects on the individual and society
identify and discuss ways in which the roles of family members and of people in the community have changed or may change	identify and consult people and resources that can help them to respond constructively to the changes they are experiencing	understand the relationship between stages in their personal growth and changes in their roles, responsibilities, needs, capabilities, and interests

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
identify changes in the community and discuss ways in which those changes affect students	identify and use adaptive strategies to adjust to new situations and people	understand the relationship between lifelong learning and successful adaptation to change and identify strategies that will enable them to become lifelong learners
identify and describe significant changes that are taking place in the world	understand the relationship between lifelong learning and the ability to manage change	relate their studies in school to a wide variety of future career opportunities
understand the concept of flexibility and describe and discuss ways in which people have adapted and/or are adapting to change	understand the ways in which their personal actions can make a difference and identify strategies for bringing about desired changes	use problem-solving skills to deal with the effects of change
use problem-solving skills to deal with changes that affect them	investigate global changes that affect or will affect their lives	identify, analyse, and evaluate changes in the local community with reference to physical, cultural, economic, political, social, and environmental aspects
understand and explain reasons for the creation of new products and establishment of new services	identify and describe changes in the types of occupations, composition of the work force, and types of employers in the community	identify, analyse, and evaluate a variety of changes that have occurred or are occurring in business, labour, and industry
change ordinary items into extraordinary creations *(e.g., make a periscope from small mirrors and a milk carton; recycle "junk" to make artworks)*	discuss the effects of a variety of social and economic circumstances on people's lives	understand the ways in which changes in the economy may affect them now and in the future
	develop and apply problem-solving skills to deal with changes that affect their personal lives and changes that affect their community	identify some significant changes in technology and analyse and evaluate their impact on the world of work
	identify some significant technological changes and describe their impact on society	identify, analyse, and evaluate significant changes and trends in the Canadian and international business community
	identify some changes in roles, lifestyles, and careers in their family and community, and discuss the ways in which changes affect and interact with one another to produce further change	demonstrate understanding of what the goal of "sustainable development" implies for our treatment of the environment and use of resources
	identify and describe a variety of occupations and discuss changes in the occupational roles of men and women in our society	evaluate and analyse evidence in order to formulate viewpoints and plan for the future
	identify and describe actions consumers can take to influence the type and quality of products and services available	

Outcomes for Mathematics, Science, and Technology

A. Understanding Models, Theories, and Perspectives

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
1. know how to investigate, build, explain, and evaluate models and theories representing the natural and human-made worlds		
describe, extend, generalize from, and create patterns in order to build mathematical models and solve everyday problems	describe, extend, generalize from, and create patterns and explore the relationships among them	use algebraic notation to represent the general term of a pattern and employ algebraic modelling as a strategy in solving relevant real-life problems
classify and seriate common objects, both living and non-living, according to established criteria *(e.g., materials – texture, size, mass, flexibility, volume, odour, colour, hardness; living things – coverings, movement, colour, protection, functional parts)*	recognize and describe patterns in natural and human-made environments *(e.g., the spiral of a shell, the petals of a flower, the symmetry of butterfly wings, the design of a bridge)* and systematically apply classification criteria to them	recognize and describe complex patterns and relationships in natural and human-made environments *(e.g., patterns in the distribution of plants and animals, rocks and minerals; classification systems; water, lock, dam, and irrigation systems; food webs; chemical and physical patterns; the operation cycle of an engine)*
create and apply their own criteria for classifying or seriating common objects and living things	create and apply their own simple systems for classifying objects and living things, based on the selection of common attributes	apply both their own classification systems and established classification systems to objects and living things
see relationships among objects, images, and systems with respect to size, shape, colour, strength, and texture. For example, the texture of two materials determines the method of joining them *(e.g., gluing, binding, fastening, and stitching)*, the adaptability of a material allows it to meet different needs *(e.g., wood can be used to make toys, paper, buildings, boats)*	demonstrate an understanding of form, shape, colour, texture, strength, and structure and how they relate to function and purpose *(e.g., a bridge is built for strength; a model car is designed for speed; a kite is designed for flight)*	recognize and compare the characteristics of a collection of objects, including their physical, chemical, functional, and aesthetic qualities
compare, evaluate, and discuss the design of personal and household items *(e.g., types of shoes, coats, mugs, furniture)*	compare, evaluate, and discuss the design and function of familiar products, processes, and systems *(e.g., motor cars, malls versus local stores, the postal system versus the telephone system)*	evaluate and express opinions about the functions and aesthetic value of various products, processes, and systems, and suggest improvements *(e.g., investigate the structure and applications of transportation, communication, manufacturing, weather-forecasting, banking, food-processing, and irrigation systems; think critically about the potential effects of emerging technologies such as applications of living-tissue cultures, genetic engineering, satellite communications, and imaging)*

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
identify changes in their environment over a period of time	predict changes in themselves, others, and the environment	predict changes by observing and analysing processes and trends in the immediate environment *(e.g., changes in organic and inorganic materials; changes in rural and urban environments caused by technological applications)*
identify predictable events in their lives and create timelines to track and record simple human-made and natural patterns, events, sequences, and movements *(e.g., birthdays, holidays, seasonal changes, weather patterns, plant growth, personal growth, simple astronomical patterns, shadows at different times of day, the sequence of traffic lights)*	describe cyclical occurrences in their lives and in the natural world and develop timelines to track and record them *(e.g., phases of the moon, lighting of the streets, activity/rest cycles, feeding cycles, growth rings on a tree, changes of state)*	describe cyclical occurrences in the world and the universe *(e.g., migrations; movements of the earth, moon, and sun and relationships among them; movements of constellations and planets)*
describe familiar changes in the world around them as a function of time *(e.g., the pattern of a shadow, clouds, seasons, weather, animal adaptations to seasons, changes to human-made structures, their own growth)*	understand the relationships among events, time, distances, and speed/velocity *(e.g., estimate and measure distances and the time that objects take to traverse them; use time as a variable in an experiment; design, construct, and calibrate a device to measure units of time)*	understand the relationships among events, time, distances, and velocity *(e.g., the relationship between the speed of a plane travelling eastward and the speed of the earth's movement)*
explain ways in which living things interact and adapt to their natural environment *(e.g., nesting, migration, hibernation, camouflage, and simple food chains)*	explain the ongoing process of change in the natural environment *(e.g., the earth's movement causing day and night and the seasons; signs of spring, summer, fall, and winter; food cycles)*	explain theories about the process of change in the environment over periods of time *(e.g., the slow evolution of ecosystems to an equilibrium state; population dynamics; pollution influences; the effects of conservation efforts; the impact of technological developments)*
describe the interaction of plants and animals in their environment	identify plants and animals native to particular habitats, and describe the ways they interact *(e.g., in a pond, woodlot, schoolyard, forest, stream, city)*	explain some models and theories about the interactions among living organisms *(e.g., tropisms; photosynthesis; host/parasite relationships and symbiotic associations; oxygen/carbon dioxide cycles; food cycles; human dependence on plants and animals)*
identify natural and non-natural changes to non-living materials in their environment *(e.g., the soiling of carpets, scorching of pots, production of flame, heat, and smoke by a burning candle)*	explain ways in which materials are changed naturally *(e.g., rust, tarnish, decay, erosion, the fading of colour)*	investigate and explain ways in which matter changes *(e.g., physical and chemical changes)*

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
understand the concept of energy through examples from the immediate natural and human-made environment *(e.g., a ball rolling, a toy car moving, a kite flying, a light-bulb giving off heat, wind moving leaves, magnets moving objects)*	identify and describe the characteristics and properties of one or more forms of energy *(e.g., electrical, sound, light, magnetic, heat, mechanical, chemical, nuclear)*	investigate and explain the ways in which the energy requirements of homes, cities, nations, and the world are met and evaluate those ways in relation to the availability of natural resources
identify the forms of energy used and/or produced by everyday things such as flashlights, electrical appliances, toys, and machines	conduct experiments to illustrate the conversion of various forms of energy, and explain the results *(e.g., electricity into heat, mechanical energy into sound, kinetic energy into electricity, chemical energy into electricity)*	identify and describe various objects and machines in which the conversion of energy takes place *(e.g., electric kettles, microwave ovens, light fixtures, power tools, bicycles)* and identify and explain the energy conversions taking place
2. be able to use the languages, models, symbols, and methods of mathematics, science, and technology with accuracy and in appropriate contexts		
read, listen, observe, represent, construct, discuss, write, diagram, chart, and graph in order to investigate and acquire skills and knowledge in mathematics, science, and technology	create and/or use models, symbols, pictures, graphs, charts, diagrams, and terminology in order to investigate and acquire skills and knowledge in mathematics, science, and technology	use a variety of methods, technologies, models, checklists; sketches, graphs, and charts; oral, written, and pictorial symbols; and technological devices in order to investigate, acquire skills and knowledge, and communicate effectively in mathematics, science, and technology
		use and appreciate the value of algebraic notation in mathematics
read, discuss, and follow, simple instructions in mathematics, science, and technology, and communicate them using appropriate terminology	read, discuss, follow, and evaluate instructions in mathematics, science, and technology, and communicate them using appropriate terminology, models, and symbols	acquire information by reading mathematical, scientific, and technological journals, manuals, and books and consulting databases; ask clarifying or extending questions; and apply the information accurately
3. know how to conduct an inquiry with intellectual honesty, objectivity, and discipline, as well as respect for others and the environment		
understand and follow the procedures necessary to ensure an honest investigation or inquiry	detect biases, omissions, and distortions in inquiries and learning materials and understand and follow procedures that will ensure the honesty and integrity of an inquiry	understand, value, and follow procedures that will ensure the honesty and integrity of an inquiry and be able to explain why these qualities are important in scientific and technological investigations

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
demonstrate the ability and willingness to work independently and with others, and be willing to engage in class discussions about co-operation and sharing	demonstrate the ability and willingness to work independently and with others, and to join in developing rules of group conduct with peers	demonstrate the ability and willingness to work independently and with others, and to explain the importance of collaboration for the advancement of knowledge in mathematics, science, and technology
understand and explain why it is important to be accurate, thorough, and persistent when conducting an inquiry	conduct an accurate and thorough inquiry with persistence and creativity and explain the importance of those qualities in investigations using mathematical, scientific, and technological methods	conduct an accurate, thorough inquiry with persistence and creativity and explain why these and other qualities are required in investigations using mathematical, scientific, and technological methods
4. know how to analyse and evaluate their own views and those of others		
take note of and evaluate the views, opinions, and cultural perspectives of people with whom they interact during inquiries and while collecting and using data	take note of a variety of views, opinions, and cultural perspectives and evaluate them before making judgements, bearing in mind that many currently held views reflect a Eurocentric perspective	examine and objectively evaluate a variety of perspectives before making judgements during inquiries and research
understand that, while mathematics, science, and technology use precise, quantitative methods for investigating the world, there are many different ways of explaining phenomena	understand that different disciplines may offer different types of explanations and interpretations of phenomena *(e.g., religious or mystical; imaginative; psychological; scientific and technological)*	describe different models used to interpret phenomena *(e.g., scientific, technological, psychological, sociological, philosophical, religious, mythological)* and appreciate the contributions made by each
find multiple solutions for a problem and respect and accept other people's solutions	recognize that there are a variety of solutions for many problems, assess the validity and quality of different solutions, determine the most appropriate solution, and respect and accept other people's solutions	value the fact that problems may be solved in different ways and respect and accept other people's solutions

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
5. understand and appreciate the contributions of Canadians and others to mathematics, science, and technology		
identify examples from their own and other cultures that demonstrate the contributions to mathematics, science, and technology of people of both genders and from a variety of racial/cultural backgrounds	identify, compare, and discuss examples from a variety of cultures that demonstrate the contributions to mathematics, science, and technology of people of both genders, and from a variety of racial/cultural backgrounds	identify, compare, and evaluate objects, processes, and systems drawn from a variety of cultures *(e.g., numeration systems, approaches to medicine, buildings, methods of food production in different climates)* in order to demonstrate the contributions to mathematics, science, and technology of people of both genders and from a variety of racial/cultural backgrounds

B. Understanding Systems, Structures, and Their Functions

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
6. know how to use safely a variety of technologies, materials, and tools to conduct inquiries and to design, build, and report on processes, systems, and products		
use safely a variety of simple tools and manipulative materials to extend the senses in hands-on investigations *(e.g., hand tools, magnifying lenses, measuring devices, thermometers, binoculars, plasticine, sand, water, sticks, and glue)*	use safely a variety of tools, equipment, and manipulative materials to support personal and group inquiry, experimentation, and information gathering and sharing *(e.g., hand and power tools, blocks, low-powered [40X] microscopes, stop-watches, computers, measuring devices, stethoscopes, thermometers, sieves, with liquid and solid materials)*	use safely and evaluate a variety of tools, equipment, and manipulative materials to support personal and group design, construction, inquiry, experimentation, information gathering, research, and independent studies
demonstrate awareness of the functions, uses, and variations of simple devices, mechanisms, and systems *(e.g., length, size, and combinations of levers, and size and combinations of wheels and pulleys on such things as cranes, bulldozers, trucks, all-terrain vehicles, fire trucks, and toys; tools, kitchen utensils; mechanisms used in the household and at school)*	evaluate the use and efficiency of various physical products, human processes, and environmental systems *(e.g., products such as drinking boxes and walkie-talkie radios; human processes such as lifting a box or moving from one place to another; environmental systems such as water purification, energy supply systems)*	design and evaluate various products, processes, and systems, and make modifications to increase their efficiency

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
with everyday materials, construct and use devices that show understanding of the relationships among controls, strengths, energy, force, distances, leverage, and mechanisms *(e.g., construct simple tongs, teeter-totters, cranes, levers, and pulleys from materials such as drinking straws, wool, fabrics, cardboard, batteries, bulbs, wire, and foil)*	understand the function of a mechanical or electronic control device required to operate systems and mechanisms *(e.g., toilet valves; thermostats; rheostats such as light dimmers, fuses, and circuit breakers; alarm systems; timing devices)*	identify different types of controlling devices used in a variety of processes and systems and explain how they operate *(e.g., micro switches such as optic sensors, light-dependent resistors, and solar panels; electronic, hydraulic, pneumatic, mechanical, chemical, and physical switches and valves; processes and systems used in farming, the performing arts, manufacturing, and business)*
use concrete materials, computers, and other tools and equipment to construct representations of simple concepts and procedures in mathematics, science, and technology *(e.g., concrete materials to represent number patterns; various types of clocks to measure the duration in scientific processes; models to represent concepts)*	use concrete materials, computers, and other tools and equipment to construct representations of increasingly complex concepts and procedures in mathematics, science, and technology *(e.g., an abacus; simple weather-forecasting devices; time-measuring devices; devices incorporating one or more simple machines)*	use concrete materials, computers, instruments, and other tools and equipment to construct representations of concepts and procedures in mathematics, science, and technology *(e.g., models of atoms and molecules, the solar system, windmills, dams, water wheels, three-dimensional geometric shapes)*
understand that mathematics, science, and technology involve the use of manipulative materials, tools, equipment, resources, and processes and give examples of such applications *(e.g., engineers, technicians, scientists, and mathematicians use equipment for measuring, viewing, storing, manipulating, handling, and designing)*	recognize that mathematics, science, and technology involve the application of concepts *(e.g., patterns, numeration, space, energy, life, matter, change, interrelationships, design, fabrication)*	understand, select, and use a broad range of mathematical, scientific, and technological concepts and skills in inquiry and design activities *(e.g., equations, algebraic notation, geometric proofs, chemical reactions, physical laws and properties, characteristics of living and non-living things, ergonomics, characteristics and functions of materials and tools)*
7. bring creative and critical thinking skills and a disciplined approach to the processes of inquiry, problem solving, and design		
assemble, join, and shape a range of similar and different materials and components in simple and creative ways using a variety of technologies, tools, and methods *(e.g., glues, nails, screws; paper types, wood, plastic, fabrics, and fibres including wool; lubricants; simple power sources such as elastic bands, springs, human force)*	demonstrate knowledge of the characteristics of various materials and how modifications affect their qualities *(e.g., variations in wood, plastic, paper, iron, cloth, rubber when subjected to temperature changes, chemicals, bending, sun, corrosion, ageing)*	select various materials according to their appropriateness for specific functions, and explain how their special characteristics may be enhanced *(e.g., characteristics such as insulating properties, light sensitivity, flotation properties, rigidity, strength, durability, degradability, ergonomic and aesthetic qualities)*

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
work independently and in groups to design and create products using found materials, evaluate the products, and identify new possibilities in familiar objects and environments *(e.g., simple commercial toys, familiar machines, tools, household utensils, health-care utensils)*	work independently and in groups to design, create, evaluate, and modify products and identify in objects and environments possible solutions to a challenge or problem *(e.g., recycle a bleach container into a bird feeder or a funnel; transform part of a lawn into a vegetable garden)*	design, create, and evaluate products, processes, and systems in response to a challenge or problem, demonstrating the ability to meet appropriate standards of design and production *(e.g., design, build, and test products with care and attention to aesthetics, ergonomics, environmental friendliness, cost, uses, cultural appropriateness, durability)*
		understand that learning in mathematics, science, and technology occurs through the process of overcoming obstacles and solving problems
8. understand and be able to use a variety of concepts and skills associated with natural, human, numerical, and spatial systems and processes		
understand and apply place value and our numeration system; make concrete, pictorial, and symbolic representations of whole numbers and simple fractions; estimate, read, and write numbers; and estimate answers to simple calculations	identify and understand whole-number place values and decimal place values; estimate, read, and write numbers; and estimate answers to calculations	use computational estimation and mental calculation to arrive at approximate value, and judge the validity or reasonableness of answers in a variety of problem-solving contexts
understand the fundamental operations of addition, subtraction, multiplication, and division of whole numbers and their interrelationships and perform these operations with accuracy	select and use an appropriate method of computation *(e.g., manipulative materials, paper and pencil, mental/estimation, calculator and/or computer)* in solving a problem that involves computations using whole numbers, fractions, percentages, and decimals	demonstrate in context, with and without the use of a calculator and/or computer, a thorough knowledge of arithmetic facts and accurate computational and mental calculation skills involving whole numbers, decimals, fractions, per cent, integers, ratio and rate, powers, and square root
demonstrate understanding of the spatial relationships in their own environment, the properties of the objects in it, their interrelationships, and the effects of motion geometry	use motion geometry to verify the basic properties of figures and to recognize and create patterns and designs	demonstrate understanding of spatial and geometric relationships by investigating two-dimensional, three-dimensional, and transformational geometry

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
demonstrate understanding of the attributes of two-dimensional figures and three-dimensional shapes *(e.g., by making concrete models, drawings, diagrams; through computer simulations; or in descriptions using accurate terminology)*	describe, model, draw, construct, classify, and compare two-dimensional and three-dimensional figures, explain their properties using accurate terminology, and use Cartesian co-ordinates systems to describe the locations of points and figures and represent relationships defined by tables and graphs	use co-ordinate geometry to describe and represent relationships defined by tables, graphs, and equations or formulas
understand the concepts of temperature, time, distance, speed, length, perimeter, area, capacity/volume, mass, and money and, where applicable, use standard (SI metric) and non-standard units to estimate, measure, and compare quantities *(e.g., accurately measure the perimeter of a desk-top in centimetres; estimate the length of a room in arm-lengths)*	estimate, measure, calculate, and record temperature, length, perimeter, area, capacity/volume, mass, money, time, distance, and velocity, using appropriate units	identify, develop, and apply procedures for measuring the characteristics of a variety of shapes, liquids, and solids and for examining the interrelationships between and among mass/weight, volume and density, speed/velocity, distance, displacement, and time, using concrete materials and appropriate units
use mental calculation and the skills of computational and measurement estimation and commit to memory basic facts, once understood *(e.g., addition and multiplication tables)*	value and use mental calculations and the skills of computational and measurement estimation through independent use; and commit to memory basic information such as the multiplication table to 12 x 12	value and use mental calculations and the skills of computational and measurement estimation, and be able to apply those skills to new problem-solving tasks
identify, create, and generalize from patterns and series	identify patterns and functions, describe them in a variety of ways, and explain the relationships among them	represent mathematics symbolically
		solve problems using linear equations with one variable
identify and describe the major parts of the human body as they relate to the body's needs and functions and apply that knowledge to healthy living	explain the needs, structures, systems, and systems functions of the human body and apply that knowledge to healthy living *(e.g., circulatory, digestive, and reproductive systems; human biological, psychological, and social needs and functions)*	understand how the proper functioning of systems in the human body contributes to healthy living, and explain what happens when a system breaks down

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
describe, using accurate terminology, a variety of living and non-living things observed through informal investigations *(e.g., animals and their behaviour and interaction; plants and their growth patterns; plastic, wood, steel, paper, rubber, rocks)*	describe and compare, using appropriate and accurate terminology, the physical properties of living and non-living things *(e.g., plants and animals common to the immediate environment or to a particular habitat; rocks, minerals, fossils, and soils observed in a particular area)*	describe the properties and structure of matter and relate that knowledge to real-life situations *(e.g., the development of new products; the process of refining the earth's natural resources into usable forms; the selection of natural and synthetic materials for different purposes)*
investigate simple cause-and-effect relationships using familiar materials and environments *(e.g., water pressure, displacements, and movement; temperature, weather, and human adaptations to them)*	design and perform experiments to demonstrate cause-and-effect relationships *(e.g., pendulum swings; effects of nutrient deprivation on a plant; effect of moving the fulcrum of a teeter-totter; benefits of using tools; benefits of using devices that give protection from the weather)*	understand and explain global cause-and-effect relationships and offer solutions to related environmental challenges such as the impact of pesticides and fertilizers in the food chain, the impact of flood-control systems, the effects of forest loss on oxygen supplies, and the depletion of non-renewable resources
recognize and explain the similarities and differences among living things *(e.g., all living things require water and nutrients; most animals are mobile, while plants are not)*	design and perform experiments *(e.g., involving seed germination, plant growth)* to investigate the needs of living things	design and perform experiments to investigate the structure and physiology of living things, while showing concern and care for their well-being
design and perform experiments to investigate fundamental laws of nature *(e.g., movement – experiments with marbles placed on ramps of varying heights, paper gliders, kites, bouncing balls, toy cars)*	design and perform experiments to investigate solids *(e.g., experiments to compare flour, sand, salt, sugar, baking powder, and plaster of Paris)*, and liquids *(e.g., experiments to compare water, oil, and vinegar)*	investigate the physical and chemical properties of matter, using concrete materials and experimentation, and relate those properties to environmental and economic conditions in real-life contexts
recognize movement of natural phenomena such as the sun and moon and identify patterns and make predictions on the basis of their own experience and observations	describe the movements of the earth, moon, and sun and their related effects *(e.g., day and night, seasons, phases of the moon and sun, eclipses of the moon and sun, tides)*	describe and explain the movements of the earth, planets, and constellations and relate that knowledge to earth travel, space travel, the availability of energy and food sources, and the future direction of space exploration
observe and describe weather conditions and seasons and the effects of weather on our daily lives *(e.g., use simple tools to make observations about the weather)*	observe and describe a variety of weather conditions, ways of predicting the weather, and the effects of weather and seasons on their lives and the environment *(e.g., design, construct, and use a variety of simple weather instruments)*	investigate weather and climatic variations and conditions, explain those variations and conditions, relate them to environmental challenges, and suggest solutions

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
identify some of the sources and properties of light *(e.g., reflection and transmission)* from investigations involving lamps, flashlights, magnifiers, mirrors, lenses, and prisms	investigate properties of light, including reflection, transmission, and dispersion, using mirrors, lenses, and prisms	demonstrate understanding of: the sources of light; the properties of light, including transmission, composition, reflection, refraction, and dispersion; and the materials that affect light, such as converging and diverging lenses, prisms, plane and spherical mirrors, and other media of transmission
describe the characteristics of a variety of materials and objects *(e.g., plastic, wood, metal, paper, rubber, sand, funnels, siphons, containers, sieves, tubes, magnets)*	design and perform experiments in which particular physical properties of materials are analysed, measured, and compared *(e.g., the absorbing ability of various materials; the tensile strength of elastic bands; the colour, hardness, texture, or transparency of different materials; the capacity of solids for expansion; the solubility of different substances)*	
		demonstrate, using a variety of scientific technologies, understanding of cell theory and of the characteristics of animal and plant cells, including their components, organization, functions, and differentiation
		demonstrate understanding of the characteristics of green plants, including their parts, functions, physiology, and importance to humans and the environment
be aware of the sources of some of their everyday needs *(e.g., food, clothing, shelter)*	demonstrate understanding of the role of food and nutrition in their lives	demonstrate understanding of food and energy, food production, and food processing

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
9. be able to create, analyse, and evaluate physical products, human technological processes, and environmental systems		
use simple tools to create and build simple objects, models, and systems in response to a given challenge or problem	use a design process to create and build simple objects, models, and systems that perform a specific task, in response to a given challenge or problem *(e.g., bridging devices to span a distance; devices to lift objects)*	use a design process and appropriate equipment and materials to create physical products, human processes, and environmental systems, in response to a challenge or problem *(e.g., develop a plan; gather appropriate materials; test, modify, and assemble the materials; test and evaluate the process and the product; modify as necessary)*
understand the functions of various systems and their interrelationships *(e.g., toys – such as a fire truck with ladders and wheels, a hand puppet with movable parts)*	demonstrate and explain the functions of the components of simple technological systems and suggest how the interrelationships among those components may be improved *(e.g., components of bicycles, mechanical clocks, roller skates, mechanical food mixers)*	understand the components of complex technological systems and suggest how the interrelationships among those components may be improved *(e.g., robotic applications; remote controls and computer interfaces; electronic circuit boards; home electrical-distribution systems)*
10. be able to identify and describe aesthetic qualities in systems, objects, products, and environments and incorporate such qualities into their own designs and creations		
select, describe, and use natural and synthetic materials during investigations in their immediate environment *(e.g., wood, plastic, paper, fabrics, fibres, foods, metals)*	identify and use the most appropriate and aesthetically pleasing materials for a specific purpose *(e.g., with consideration for colour co-ordination, proportion, texture, strength, function, harmony)*	identify and appreciate the practical and aesthetic values of materials and tools used in solving technological problems *(e.g., in space exploration and engineering, aquaculture, computer shopping, high-speed mass-transit systems)*
describe their impressions of and reactions to the aesthetic qualities of objects in their immediate natural and human-made environment *(e.g., texture, lustre, colour, function, proportion, harmony)*	describe, in precise language, their impressions of and reactions to the aesthetic qualities of manufactured and natural objects, systems, ideas, and environments	articulate and defend, in precise language, their judgements about the aesthetic qualities of objects, systems, ideas, and environments

C. Investigating Interrelationships and Change

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
11. understand the ways in which mathematics, science, and technology are interconnected		
recognize and use alternative representations of the same idea *(e.g., use more than one solution for the same problem, represent number patterns using concrete objects)*	recognize and use alternative representations of the same idea *(e.g., use more than one solution for the same problem; use different graphic representations and diagrams of the same data)*	recognize, compare, and use alternative representations of the same idea *(e.g., use several solutions for the same problem; use a variety of charts, graphs, diagrams, symbols, equations, and models to present the same information)*
identify relationships among mathematics, science, and technology in order to conduct interdisciplinary inquiries at the home, school, and local community level *(e.g., in a woodlot study, a schoolyard study, a study of the telephone, school bus, clothing, or neighbourhood)*	identify relationships among mathematics, science, and technology in order to conduct interdisciplinary inquiries at the community level *(e.g., in a grassy-area study, a field study, a stream study, a study of television, bicycles, kitchens)*	identify relationships among mathematics, science, and technology in order to conduct interdisciplinary inquiries at the regional, national, and global level *(e.g., investigations of the communications, construction, manufacturing, and transportation industries)*
12. understand that mathematics, science, and technology do not exist in isolation but shape and are shaped by a variety of societies and cultures		
use mathematical, scientific, and technological skills and knowledge in the classroom and in their daily lives	use mathematical, scientific, and technological skills and knowledge in the classroom, school, and their daily lives, and explain the importance of such knowledge and skills to society	use mathematical, scientific, and technological skills and knowledge to investigate a variety of issues, and demonstrate an awareness of the benefits and limitations of such knowledge and skills
identify and compare examples of objects and products used for the same purpose in their own and other cultures *(e.g., toys, vehicles, bridges)*	identify and compare examples of different technologies used for the same purpose in a variety of cultures *(e.g., cultivation devices, irrigation systems, communication systems, transportation systems, recreational equipment)*	identify and compare, in two or more societies, the use of different technologies for the same purpose *(e.g., transportation methods in communities that live on water, on land, in the desert, in the Arctic)*
identify ways in which particular technologies change the immediate environment *(e.g., thermostats; snow ploughs; building projects; old and new types of tools; kitchen utensils and appliances; transportation methods)*	identify ways in which technologies modify a variety of environments *(e.g., in forestry, fishing, building, mining, and food production; in electrical-energy production; for conservation and environmental protection)*	understand and describe some of the positive and negative effects of technologies on environments and societies

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
identify and describe the technologies relevant to their lives in a familiar environment *(e.g., cars, toys, tools, utensils, clocks, televisions, radios, traffic lights; tractors, harvesting machines, and trucks used for farming and food production)*	identify, compare, and explain the development of technologies that are relevant in their lives *(e.g., television; electronic and video equipment; home appliances; electronic toys; technologies that support a healthy and safe lifestyle; farming equipment; construction equipment)*	understand the ethical, personal, local, and global consequences of the use or misuse of technologies in the past and the present and suggest some possible consequences in the future *(e.g., in suntanning practices, chemical- and industrial-waste disposal, nuclear-power management, genetic engineering)*

13. know how to explain and evaluate relationships between humans and the environment

describe some of the different ways in which other cultures interact with the natural world	describe and compare the relationship to the natural world of societies with high and low levels of technological development	explain and compare the world-views of other cultures and societies as they relate to the natural world
be comfortable in and familiar with school and neighbourhood natural habitats	describe the bioregion in which they live and visit representative local natural communities *(e.g., marsh, woods, rivers, meadows)*	demonstrate concern and care for their bioregion by acting to ensure its sustainability
		understand the importance of their bioregion and compare it to others as a means of achieving global awareness
identify relationships among technology, people, and the immediate environment *(e.g., technology to help people cope with weather conditions; technology and its influence on the local environment; technology and its influence on food production; technology in local conservation practices and environmental protection projects; technology that assists physically challenged people)*	identify and explain relationships among technology, people, and the environment *(e.g., water purification systems; road and transportation systems; food production, processing, and preserving; sewer and storm drainage systems; housing projects; recycling systems; conservation practices)*	identify and describe environmental problems created by technology and suggest solutions *(e.g., ozone depletion and the increase of ultra-violet rays; acid rain and water pollution; pesticide poisoning; reduced food production; endangered animal species; rain-forest depletion)*

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
identify and describe a variety of interrelationships in natural and human-made environments through school and neighbourhood studies *(e.g., effects of different habitats on animal life in open fields, woodlots, parking lots, playgrounds; effects of thermostats on heat; effects of storm drains on water run-off; dependence of humans on plant and animal products for food)*	identify and describe a variety of interrelationships in natural and human-made environments through community studies *(e.g., in woodlots, grassy areas, wet and dry areas; in road and transportation systems and water purification systems; in ways humans use plants and animals for food, clothing, and building materials)*	identify and describe problems related to interrelationships in natural and human-made environments through regional, national, and global studies, and suggest solutions *(e.g., ecological imbalances and endangered species; food cycles, production, and scarcity; gas and water cycles, production, consumption, and pollution; the unequal sharing of global resources and related disparities)*
14. demonstrate concern for living things and ecosystems		
care for a variety of living things in the school and local environment and explain the similarities and differences in their needs and characteristics *(e.g., maintain bird feeders; plant bulbs; care for common plants and animals; maintain an aquarium; use an incubator, greenhouse, or terrarium; plant trees; study pets)*	care for a variety of plants and animals and explain their needs, differences, similarities, interrelationships, and life cycles *(e.g., maintain a vivarium, terrarium, aquarium, ant formicary, or worm composter; maintain a bottle ecosystem; beautify the school grounds; care for classroom plants and animals)*	explain the adaptability of living things to natural and artificial environments with reference to their interdependence, life functions, and life cycles, and engage in a personal project to care for one or more living things *(e.g., use hydroponics and other advanced growing techniques; study micro-organisms and their effects on food production and preservation; explain the use of hormones and other chemicals on animal growth and health; do an evaluative study of zoos and commercial aquaria)*
understand some of the ways in which humans have an effect on ecosystems	compare the past and present ecology of their community	describe the ecological history of their bioregion and explain the influence on it of human interactions and technology
15. be motivated to play their part in preserving and enhancing the environment		
identify and imitate positive environmental activities observed in their school and community	identify positive environmental activities and explain their contribution to sustainability *(e.g., reducing, reusing, recycling, rehabilitation, restoration, energy conservation)*	describe several environmental values they personally hold and explain how they apply these values in everyday life

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
	identify environmental problems and propose solutions to ensure a sustainable future	communicate creatively *(e.g., using prose, drama, multi-media presentation)* a vision of a sustainable future in which the interaction of science, technology, and environmental concern allows for the flourishing of all life
identify a school environmental issue and prepare an action plan to address it	do research to identify and analyse the advocacy skills used in response to a local environmental issue *(e.g., as revealed in media coverage, guest speakers' presentations)*	use advocacy skills to promote the development of positive ecological awareness and behaviour *(e.g., communication skills – letter writing, petitioning, advertising; co-operative skills – debating, conducting surveys, consensus building; research and promotional skills – using the media and governmental and non-governmental agencies both as sources of information and as vehicles for disseminating information to the general public)*
understand that their personal behaviour affects the environment and take an active part in preserving resources and energy	show concern and care for the environment and for the wise use of energy *(e.g., repair dripping faucets; collect papers, aluminum cans, and bottles for recycling)*	practise reducing, reusing, recycling, refusing, and rethinking and explain the implications of these activities on a local, community, and global scale
		understand and compare the short-term and long-term effects on the environment of the use of energy from a variety of sources
participate in activities that demonstrate a care for life *(e.g., feeding birds, planting flowers, germinating seeds, gardening)*	participate in ecological restoration activities in the schoolyard or local community *(e.g., schoolyard naturalization, school tree nurseries, wildlife gardens, tree planting, nest-box construction, wildlife habitat enhancement, environmental clean-up)*	assess possible sites for community ecological restoration projects and prepare and implement an action plan *(e.g., stream, woodlot, and other restoration projects in co-operation with community groups, conservation authorities, or government ministries)*

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
16. see the relationship between their own knowledge and abilities and possible career opportunities in the fields of mathematics, science, and technology and, where appropriate or necessary, question occupational stereotypes related to gender or background		
identify ways in which mathematics, science, and technology are used in the world around them *(e.g., tools, kitchen utensils, computers, calculators)*	describe the roles played by mathematics, science, and technology in a variety of career and work opportunities *(e.g., engineering, nursing, lab technology, commercial sales)*	examine their own interests, aptitudes, and abilities in relation to a variety of career and work opportunities and investigate the role of mathematics, science, and technology in these occupations
demonstrate a bias-free awareness of different types of careers involving mathematics, science, and technology and describe ways these careers meet various needs in the community	understand that careers involving mathematics, science, and technology are accessible to all who are willing to prepare for them	use statistical information to identify groups of people *(e.g., women, racial/ethnocultural minorities, disabled persons)* who may be under-represented in careers in mathematics, science, and technology, and discuss ways of eliminating such inequities
understand the mathematical, scientific, and technological concepts and processes involved in the production of familiar items, and relate them to manufacturing equations and careers in industry *(e.g., toy manufacturing, food production and processing)*	understand mathematical, scientific, and technological concepts, materials, and processes involved in making simple and complex machines, equipment, and devices *(e.g., levers, pulleys, inclined planes, tools, toys, household utensils, kitchen devices)* and use this knowledge as a basis for investigating commercial production methods and careers in manufacturing	understand the mathematical, scientific, and technological concepts, materials, and processes involved in mass-production techniques *(e.g., force, work, energy, efficiency, friction, gravity, mass; simple and complex machines and mechanical advantage; assembly lines, robotics, electronics, and the invention of new formulae and products; grafting to produce new and superior crops)* and use this knowledge as a basis for investigating commercial production methods and careers in manufacturing and industrial research and development
perceive and acknowledge the importance of applying themselves in mathematics, science, and technology activities	perceive a connection between their personal effort and self-discipline and their achievement in the mathematics, science, and technology program	establish personal goals and work towards achieving them in order to maximize their learning in mathematics, science, and technology

D. Inquiring, Reasoning, and Reporting

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
17. be motivated to ask questions, seek answers, and communicate results		
ask questions about the world around them and discuss the validity of answers	ask questions about and investigate their immediate environment and the wider world, discuss the answers, and communicate the results to others	ask questions and pursue answers through independent inquiry and research, and communicate their findings in a variety of formats and to a variety of audiences
demonstrate a positive attitude towards mathematics, science, and technology; manipulate concrete materials spontaneously and with confidence; and show respect for the success and contributions of others	demonstrate a positive attitude towards mathematics, science, and technology; confidently and spontaneously conduct an inquiry involving the manipulation of concrete materials; and show respect for the success and contributions of others	demonstrate a positive attitude towards mathematics, science, and technology; confidently engage in independent inquiry, research, and the manipulation of concrete materials; and show respect for the success and contributions of others
18. know about and be able to use a variety of methods to gather and analyse information, make inferences, draw conclusions, and make and communicate informed decisions		
use a variety of investigative strategies *(e.g., observing, collecting, sketching, drawing, writing, talking, information processing)* to gather, analyse, and interpret information drawn from their immediate natural and human-made environments and communicate the information clearly	use investigation skills to gather, analyse, interpret, and evaluate information, communicate the information clearly, and apply it appropriately	gather data from a wide variety of sources, analyse and interpret it, make decisions based on it, and communicate the information and decisions in a fashion appropriate to the intended audience
demonstrate a beginning understanding of the concepts of chance and probability through informal investigations involving data collection and interpretation	understand and explain the concepts of chance and probability through investigations involving the collection, organization, interpretation, and application of statistical information	investigate and apply the concepts of probability and statistics in the course of inquiries
use word-processing, telecommunications, and database-management hardware and software to organize, analyse, interpret, and communicate information related to inquiries	use word-processing, telecommunications, database-management, and spreadsheet hardware and software to organize, analyse, interpret, and communicate information related to inquiries	use advanced features of word-processing telecommunications, database-management, and spreadsheet technologies to organize, analyse, interpret, and communicate information in a fashion appropriate to the intended audience
develop simple presentations, using multi-media and hyper-media technologies, to communicate the results of personal investigations	develop presentations, using multi-media and hyper-media technologies, to communicate the results of a variety of investigations	develop presentations using the advanced features of multi-media and hyper-media technologies

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
19. be able to use appropriate information technologies in the collection, storage, processing, and communication of data		
enter and retrieve data, using appropriate techniques *(e.g., keyboard, mouse, track-ball, voice input)* and simple editing features	enter and retrieve data with increasing accuracy and speed, using appropriate techniques and a variety of editing features	enter and retrieve data with high levels of accuracy and speed, using appropriate techniques and advanced editing features
use software packages to design products and communicate information in a format that combines text and graphics	use one or more integrated or multi-media software package(s) to design products and communicate information in a format that combines text, graphics, and sound	use one or more integrated or multi-media software package(s) to design products and communicate information in a format that combines text, graphics, sound, animation, and video
use word-processing, multi-media, hyper-media, and database software	use word-processing, multi-media, hyper-media, database, and spreadsheet software programs, and select appropriate tool software	use word-processing, multi-media, hyper-media, database, and software programs, and select the best tool for the task from a variety of software
use calculators and computers to explore simple patterns and relationships and solve problems relating to familiar objects and settings	use calculators and computers to explore patterns and relationships and solve problems relating to a variety of settings, from the familiar to the global	use calculators and computers to explore patterns and relationships and solve problems relating to regional, national, and global settings
use computers to explore simple simulations/models of real or imaginary situations, products, systems, and processes *(e.g., the structure of simple food chains; the processes of managing a lemonade-stand, buying and selling goods, heating unknown substances, designing structures and products)*	use computers to explore and evaluate simulations/models of real or imaginary situations, products, systems, and processes *(e.g., the process of flight; the operations of machines, ecosystems, astronomical systems; the process of designing structures and products)*	use computers to develop, explore, and evaluate simulations/models of real or imaginary situations, products, systems, and processes
20. be able to apply appropriate methods of inquiry and design to investigate, analyse, and resolve issues related to the natural and human-made environments		
follow the steps used in a standard scientific/technological inquiry method *(e.g., question, observe, classify, analyse, control variables, reflect, predict, experiment, test multiple solutions, draw conclusions, communicate results)*	use scientific/technological methods during inquiry processes, retracing and repeating steps as required *(e.g., pose problems, infer and hypothesize, analyse, control variables, experiment, test multiple solutions, evaluate and reflect, draw conclusions, apply and communicate results)*	understand the importance to science and technology of scientific/technological methods of inquiry, use such methods to conduct a personal inquiry, and explain the inquiry process used to others

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
21. know about and be able to use a variety of problem-solving strategies		
demonstrate a beginning understanding of problem-solving strategies in mathematics, science, and technology	use problem-solving strategies in mathematics, science, and technology	use a variety of their own and generally accepted problem-solving strategies in mathematics, science, and technology
recognize and solve personal problems and simple problems related to a familiar environment by applying thinking and communication skills acquired through mathematics, science, and technology activities	use a variety of strategies to pose and solve everyday problems with a mathematical, scientific, or technological dimension, and evaluate and justify their conclusions	use a variety of strategies to pose and solve a wide range of everyday problems drawn from relevant experiences across the curriculum and having a mathematical, scientific, or technological dimension
identify and describe components of their school and neighbourhood communities, including living things, structures, buildings, services, functions, roles and their interrelationships, and local issues	use scientific, mathematical, and technological methods of inquiry to investigate, understand, and describe local areas and issues	use a variety of problem-solving strategies to investigate the capacity of the earth to sustain life and development
demonstrate understanding of a basic design process by using words and drawings to describe the steps in a design project *(e.g., describe the steps to be followed in a simple experiment involving a toy car on an inclined plane)*	use a design process to identify a problem and propose a solution (or solutions) and describe the steps in the process *(e.g., identify the need to repair a bicycle, outline the procedure to be followed, and carry out the plan)*	use a particular design process to decide on a design project, outline and evaluate possible procedures, and carry out the project *(e.g., design and build an aquarium ecosystem, a case for a musical instrument)*
22. be able to implement decisions responsibly and evaluate the results critically		
understand the interdependent relationship between humans and the environment in their community	investigate the interdependence of humans and the environment at the local, national, and global levels and suggest appropriate ways to act on their findings *(e.g., the effects of weather on tourism, commerce, transportation, and agriculture; the effects of commercial fertilizers and insecticides, industrial pollutants, and people's garbage on the environment)*	identify and formulate problems and propose, discuss, communicate, and apply possible solutions relating to global and environmental issues

By the end of Grade 3, students will:	*By the end of Grade 6, students will:*	*By the end of Grade 9, students will:*
work individually and in groups to identify problems on issues of concern to them personally or to the community and investigate and make judgements about the problems or issues *(e.g., problems regarding pet health, personal health, garbage disposal)*	work individually and in groups to investigate, make decisions about, and reflect upon personal, societal, global, and environmental problems *(e.g., unequal food distribution/hunger, water shortages; diseases and epidemics; applications of technology in human conflicts)*	work individually and in groups to investigate, make decisions about, and reflect and act upon personal, societal, global, and environmental problems *(e.g., unequal food distribution/hunger, endangered species, rain-forest depletion, new and/or untreatable diseases)*

Printed on recycled paper

ISBN 0-7778-0951-6
92-135
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